THE RARE VASCULAR PLANTS OF ALBERTA

George W. Argus and David J. White

SYLLOGEUS No. 17

NATIONAL MUSEUMS OF CANADA OTTAWA NATIONAL MUSEUM OF NATURAL SCIENCES

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Photo: Parks Canada
Printed in Canada.

ISSN 0704-576X

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May 1978

A Canadian contribution to the Unesco Program
on Man and the Biosphere

PREFACE

This list is the second in a series of contributions dealing with the rare vascular plants of the provinces and territories of Canada. The Alberta list was preceded by a preliminary version which served as a means of communication with the botanical and naturalist communities in Alberta. About 50 preliminary lists were circulated and from these we received comments that were considered in the preparation of the present list. For those who would like to have some input into the preparation of the final annotated lists for other provinces, preliminary lists are still available of the rare plants of British Columbia, Saskatchewan, Manitoba, Quebec and Newfoundland and Labrador.

Our introduction to the list of the Rare Vascular Plants of Alberta is divided into two parts. The information included in the first part (sections A through E) applies generally to all the lists of rare plants and the second part (sections F through I) contains information pertinent to the Alberta list. This introduction is followed by the list of the rare vascular plants of Alberta, a bibliography, and several appendices.

We are aware that our information about many of the plants of this list is inadequate and that much work needs to be done before we can achieve our final objectives. However, we have attempted to assemble the best information available to us at this time in the hope that it will be of use to those concerned with the protection of rare and endangered plants and the natural environment. We are looking forward to receiving comments and suggestions and we hope to publish revised versions of the list as our knowledge of the rare vascular plants of Alberta is refined.

George W. Argus

David J. White

August, 1977

ADDITIONS, DELETIONS, COMMENTS AND CORRECTIONS

Please send information to:

The Rare and Endangered Plants Project

Botany Division

National Museum of Natural Sciences

Ottawa, Ontario

K1A 0M8

We would appreciate as complete documentation as possible for the addition or deletion of names from the list.

TABLE OF CONTENTS

2 Preface

7 Introduction

A. The Preliminary Lists 7
B. Definitions 7
C. Organization of the Lists 7
D. Use of the Lists 8
E. Future Plans 9
F. The Alberta List 9
G. The Protection of Rare Plants in Alberta 10
H. The Distribution Patterns of Rare Plants in Alberta 10
I. Acknowledgements 12

13 The List of the Rare Vascular Plants of Alberta

38 Bibliography

43 Appendices

I. Excluded Plants 43
II. Alien or Doubtfully Native Plants 43
III. List of the Rare Vascular Plants of Alberta in Taxonomic Sequence 44

INTRODUCTION

It has long been recognized that there is a need for scientific information on the rare and endangered plants of Canada so that appropriate conservation measures may be taken to protect them. In 1973 the Systematics and Phytogeography Section of the Canadian Botanical Association formed a Rare and Endangered Plants Committee charged with making an inventory of the rare and endangered plants of Canada. As a contribution to this project, The National Museum of Natural Sciences began to assemble data on the rare plants of the provinces and territories. As the total inventory becomes available it should be useful not only in contributing to the preservation of individual species, but in recognizing habitats and geographical areas that have unique floras which require protection. Some plants that once were a part of the Canadian flora have become extinct or have been extirpated during the past 75 years. Other plants have been so reduced in numbers that they are facing extirpation and certain habitats that were once widespread have been so extensively modified that the continued existence of many plants is threatened. While it is true that the preservation of some plants may be ensured at the individual level (e.g., growing plants in a botanical garden) it will be necessary in most cases to designate geographical areas sufficiently large to protect the habitats of these unique plants.

In compiling these lists we concerned ourselves only with rare plants because sufficient data are not available to evaluate the threatened or endangered status of most plants in the Canadian flora. As the work progressed we became aware that even information on rarity was scarce and that there is a great need for field study and taxonomic and phytogeographic research on the rare plants of Canada.

Our decision to prepare inventories for the provinces and territories rather than to compile a single national list was based on several considerations. First of all there is more information available (in the literature, unpublished data and maps and from personal experience) at the regional level than at the national level. More importantly, if plants and habitats are to be given legislative protection, the legislation will have to be enacted by each of the provinces and it is therefore desirable to have as much information as possible to aid the provincial authorities. Some provinces already have legislation that can be used to protect endangered species (Argus 1977). However, they require well-documented lists of candidate plants to be considered for such protection. Furthermore, information on regionally rare plants, that may or may not be rare elsewhere, is important to identify natural areas that deserve special consideration within these regions.

A. The Preliminary Lists

Our starting point in the preparation of the rare plant lists was the compilation of preliminary lists. These lists were based on the literature (including regional and local floras, monographs, phytogeographic papers and botanical and naturalist journals), on the Check Sheets prepared for the International Biological Program — Conservation of Terrestrial Biological Communities (IBP-CT), on personal communications and on herbarium specimens. The preliminary lists were distributed to botanists and naturalists with a request for comment and additional information. The encouraging response that we received contributed significantly to the final inventory.

B. Definitions

Plant is used in the text to indicate collectively all the individuals referable to a plant name.

A *rare* plant is one that has a small population within the province or territory. It may be restricted to a small geographical area or it may occur sparsely over a wide area. By the phrase, "a small geographical area", we mean an area about the size of the southwestern corner of Alberta from Waterton Lakes National Park to Crowsnest Pass and Pincher Creek or a strip from Cardston to Manyberries south to the International Boundary.

A *threatened* plant is one that is likely to become endangered within the foreseeable future over all or a significant portion of its range in the province or territory.

An *endangered* plant is one in danger of extirpation throughout all or a significant portion of its range in the province or territory.

C. Organization of the lists

Plants are listed alphabetically by their scientific names. For each plant the following information may be given: synonyms, a reference documenting its status as a rare or endangered plant, its distribution in North America, its distribution within the province under consideration, a reference to published or unpublished distribution maps, a short note on habitat, comments on its rare or endangered status in North America and legislative protection accorded to the plant.

To be included, a plant must be native and rare in the province or territory under consideration. However, it need not be restricted to that province or

territory. Taxonomic ranks of species, subspecies and varieties are included but forms and hybrids are not.

The nomenclature used in the lists is not based on any one authority and synonmys are given only when it is necessary for an understanding of the references that have been used.

In order to document as fully as possible the status of the plants included in this list we have cited references which are the basis for the inclusion of each name. Sometimes a reference is a published paper including a distribution map, or it may be a comment in a local flora, a personal communication from a knowledgeable individual, herbarium specimens or simply a distribution map on which we may have based a judgement. In some cases the documentation is thorough and incontrovertible whereas in others it is incomplete or outdated and in need of verification or amplification. However, we have included all plants for which we could find a credible reference supporting its rareness, preferring, at this time, to err on the side of including too many rather than too few plants. Generally we have not reidentified all specimens which serve as the basis of reports or distribution maps. However, all cited specimens have at least been scrutinized and compared with other material. As the lists are refined, specimens will be studied and errors will be recognized and corrected.

A file is kept on plants that were included but later rejected giving the reasons for their rejection. The names of some of these plants are given in two of the appendices. Appendix I (Excluded Plants) includes plants that have been rejected because they are based on misidentifications, they lack documenting specimens or because of apparent errors in label data. Appendix II (Alien or Doubtfully Native Plants) includes plants known or suspected to be alien to the province.

The North American range is given for each plant. The range in Canada and Alaska is expressed in terms of province and state in two tiers across the region roughly from west to east. The first tier is from Alaska to the Northwest Territories (Alas-YT-NWT) and a second is from British Columbia to Labrador (BC-Alta-Sask-Man-Ont-Qué-NB-PEI-NS-Nfld-Lab); a hyphen indicates a continuous distribution and a comma indicates a discontinuous distribution. The exception to this being the Alaska-Northwest Territories tier, which is always followed by a comma to indicate the end of the tier.

The continental United States range follows a semicolon. It is circumscribed by a list of states or geographical regions southward relative to the Canadian range. Once again a comma is used to indicate a discontinuity in distribution.

The detailed distribution of the plant within the province is based on herbarium records. It may be expressed in terms of a place name, a county, a national or provincial park, or a series of place names roughly circumscribing its range within the province.

Reference is made to published or unpublished distribution maps for as many plants as possible. If a map covers only a portion of its total North American range the area that it does cover is indicated after the reference. An exception to this being the maps cited as Univ. of Alta 1975, all of which are of Alberta. An atlas of distribution maps of the rare vascular plants of Canada is being assembled and it may be consulted by interested parties.

Where information on the general habitat of the plant is available this is given as a brief comment.

Comments may be included also on the rare, threatened, endangered or extirpated status of the plant in other provinces and in the United States. The status of the plant in Canada precedes the status information for the United States. The expression 'rare in Canada' is applied only to those plants which are included on published rare plant lists for each of the provinces in which they occur. For this purpose the following provincial lists have been used: Ontario (Argus and White 1977), Nova Scotia (Maher, White, Argus and Keddy 1978) and Saskatchewan (Maher, Argus, White and Harms 1978). Since we have not used any unpublished information available to us a number of additional species may be added to this category as lists are completed for the other provinces.

The status of the plant in the United States was based on the compendium of state and federal lists compiled by Kartesz and Kartesz (1977) supplemented by additional or more recent literature for the following states: Alabama (Thomas 1976), Michigan (Wagner et al. 1977), Kansas (McGregor 1977), Montana (Dorn 1977), Sweetgrass Hills, Montana (Thompson and Kuijt 1976, Oregon (Siddall 1977) and Tennessee (Collins et al. 1976).

Finally, information may be given on the legislative protection that is afforded the plant in Canada and the United States. Our information for the United States is based on McGaugh and Genoways (1976), Kartesz and Kartesz (1977) and Vermont (1972).

D. Use of the Lists

We hope that the lists will be useful in providing some of the basic information that is necessary for the protection of rare plants and their habitats. It is anticipated that one of the main uses of the lists will be as a source of candidate rare species that can be evaluated by provincial and federal rare and endangered plants committees. It is for that reason that we

have given the basis for the listing of each plant. Eventually, the listed plants should be mapped and field-checked by local botanists and naturalists. This will be an important step toward an assessment of the population status of rare plants, a determination of their ecological requirements and the monitoring of threats to their present populations.

Although these lists should only be regarded as provisional, land planners and policy makers may find them useful in recognizing plants that should be given special consideration in the evaluation of development plans.

E. Future Plans

At The National Museum of Natural Sciences we have started to accumulate, store and publish information on the distribution, population status, ecological requirements and status of the rare plants of Canada. One of our next important projects will be the mapping, by date of collection, of herbarium specimens to encourage the field-checking of the plant's present population status. Centres of rarity within the provinces and territories may be recognized and the need for the protection of floras or of unique habitats within these areas will be determined. We hope that the National Museum will become a repository for all kinds of information on rare plants. The files are accessible to all interested persons and we plan to periodically publish updated lists and reports on particular areas or plants. We hope to be able to assist local botanists in bringing endangered plants to the attention of the appropriate authorities so that measures to ensure the protection of those plants may be initiated.

It is clear that no one person or group has sufficient knowledge of the flora of Canada to make a project of this magnitude a success without the support of all botanists and naturalists. We request that you make your knowledge available to us by sending us comments on the present list. Suggested additions or deletions should be fully supported by documentation. If a specimen exists, a photcopy of the label or the label data should be included. References to, or copies of, published or unpublished distribution maps are sought. The data bank of distribution maps and information on rare plants will be available for consultation by any interested person. However, we will restrict access to information on the exact location of rare plants at the request of the informant or where we feel it is necessary to protect these populations. Unpublished distribution maps will not be released without the permission of the compiler.

The address for comments or inquiries is given on page 3.

F. The Alberta List

The list of the rare vascular plants of Alberta is unique in the National Museum's rare plants project in that we have been able to draw upon some of the many unpublished distribution maps compiled over the years by the staff of the herbarium of the University of Alberta. We have also been able to examine specimens of most of the listed plants in the four herbaria that hold extensive collections of the Alberta flora, the University of Alberta (ALTA), the University of Calgary (UAC), the Department of Agriculture (DAO) and The National Herbarium of Canada (CAN). The citation of these herbaria in the references indicates that we have seen a specimen or a photograph of a specimen in that herbarium. Although we have not been able to reidentify all of the specimens they have been scrutinized for obvious errors. Also, since some of the unpublished distribution maps may have been based on misidentifications, all anomalous distributional patterns have been checked.

The unpublished distribution maps that we saw from the University of Alberta Herbarium collection, and which are cited here, were incomplete and unverified at the time we used them. When the revision of Moss' Flora of Alberta, now being undertaken by Dr. John Packer, is published, the entire vascular plant flora of Alberta will have been mapped and the specimens on which records are based will have been reidentified. This information will then provide a sound basis for a revision of the present list.

The range information presented in the list is based on a variety of sources including Boivin 1967 and 1967-72, Breitung 1957 and 1959, Fernald 1950, Hitchcock et al. 1955-69, Moss 1959, Mulligan 1976, distribution maps and sometimes on other cited references. The habitat information was largely derived from Moss 1959 and Taylor 1970.

In applying our definition of "rare" to the flora of Alberta we found it necessary to make some arbitrary judgements, particularly in evaluating how large "a small geographical area" was. Usually we restricted its size to a relatively small area as stated in the definition. For example, we would accept an area as large as either Jasper National Park or Banff National Park, but not these two areas combined unless the specimens that we saw indicated that the plant occurred in few widely scattered localities within that area.

Some difficulties were experienced in evaluating the rare status of some plants occurring in the dry plains south of a line between Lethbridge and Medicine Hat. Some of the listed plants occur over a relatively large area but they have been included because most of the

specimens examined were older than 75 years. The present population status of many plants in this area is impossible to assess without field-checking.

In the southwestern corner of the province there are many plants that are very common within the small geographical in which they occur. We have indicated, in the Alberta range description, that such plants are "locally common." Although most of these plants are not likely to become threatened or endangered they do fit our definition of rare and could not be excluded from the list.

Finally, the rare status of plants in the boreal forest is difficult to evaluate because of the spotty collecting that has been done in this region. Certain areas such as the Swan Hills or the Lake Athabasca region appear to be floristically unique. However, the flora of the boreal region is so poorly known that we may be misled by the disjunct collecting localities into thinking that these are disjunct plant populations. Or, as is probably the case, we may not be recognizing unique habitats and floras that do occur there.

G. The Protection of Rare Plants in Alberta

Alberta has been in the forefront of the conservation movement in Canada. The many organizations of concerned individuals and the responsiveness of governments to the need for preserving natural areas are indicative of the great concern of all involved.

While there is no provincial legislation specifically protecting rare or endangered plants there are several statutes that bear indirectly on the subject of their protection through habitat protection (Argus 1977). Under the Wilderness Areas Act of 1971 several areas on the eastern slopes of the Rocky Mountains have been protected and additional wilderness areas have been proposed (Griffiths & Pharis 1976). The Environmental Conservation Act of 1970 establishes an Environmental Conservation Authority which is responsible for the conservation of natural resources, including the protection of plant life. This authority is empowered under the Wilderness Areas Act to hold public hearings on proposals for additional wilderness areas.

The Provincial Parks Act of 1970 provides for the classification of lands as natural areas or wilderness areas so that unique habitats and floras may be given special protection. To assist in parks planning a Preliminary List of the Rare Flora and Fauna of Alberta (Wallis 1977) was compiled by the Department of Recreation, Parks and Wildlife. Incidentally, this list was based in part on a preliminary version of the present list and many names have been added and deleted since that list was circulated. The Public Lands Act of 1970 also provides for the designation of natural areas and some 288 natural areas have been placed under temporary reservation.

The legislation relating to the conservation of natural areas is administered by several departments including the Department of Recreation, Parks and Wildlife, the Department of the Environment and the Department of Energy and Natural Resources. While this legislation attests to the government's concern for the wise use of its abundant natural resources, the overlapping jurisdiction of various departments may be inimical to this interest and should be reviewed.

Active citizens' organizations are a very important ingredient in the successful establishment and use of conservation legislation and Alberta has a number of such groups. The Alberta Wilderness Association has been an advocate of legislation for the protection of primitive recreational pursuits as well as ecological or benchmark wilderness areas. They have published three studies that served as a part of their submission to the provincial government on land use in the eastern slopes of the Rocky Mountains. A fourth study on the Western Swan Hills (Griffiths & Pharis 1976) deals with a unique portion of the boreal forest. This was a joint venture with the National and Provincial Parks Association of Canada, Edmonton Branch. The Calgary Field Naturalists' Society through its Natural Areas Committee has been successful in its efforts to gather information on natural areas within Calgary and to convince the city government of the wisdom of preserving many of these areas in as natural a state as is possible (Sherrington 1975).

The International Biological Program — Conservation of Terrestrial Communities Subcommittee (IBP-CT) has received outstanding leadership from a number of individuals from the University of Alberta (Fuller 1973). This program is important to the entire question of the conservation of rare plants because it has as one of its criteria for the selection of ecological reserves the occurrence of rare, endangered or otherwise significant species. Since the termination of the IBP-CT program in 1974 some of its survey activities in Alberta have been taken over by the Alberta Ecological Survey with funding from the provincial government.

The national and provincial parks systems in Alberta also play an important role in protecting some rare plants. Some of the most critical areas in the province are included in parks such as Waterton Lakes, Banff and Jasper National Parks and Writing-on-Stone and the Cypress Hills Provincial Parks.

H. The Distribution Patterns of Rare Plants in Alberta

Few rare plants in Alberta are restricted to the province and those that are considered to be endemic, such as *Carex athabascensis* and *Draba kananaskis*,

are members of taxonomically difficult groups and their taxonomic status may be questioned. Most rare plants also occur elsewhere and are here as peripheral populations either at the edge of their range or as long-range disjuncts. Although we do not have total range maps of all the listed plants, an analysis of the existing maps shows that they may be grouped into several categories according to their floristic affinities.

One of the most conspicuous groups is formed by those plants of the cordillera of the United States that just extend into the southwestern corner of the province. Some plants in this group that occur in Alberta only in Waterton Lakes National Park are important because of their small total range (*Stellaria americana* ranges into southcentral Montana and *Prenanthes sagittata* ranges into northern Idaho and Montana). More significant are those plants that are also rare throughout their United States range, such as *Douglasia montana, Gayophytum racemosum* and *Townsendia condensata*. The most important such example is *Aquilegia jonesii* that ranges southward into northwestern Wyoming and is listed as threatened in the United States (Smithsonian Institution 1975). Most plants in this group, however, are wider-ranging and more common where they do occur. These plants, including the following, are listed here because of their small range in Alberta: *Adenocaulon bicolor, Adiantum pedatum* var. *aleuticum, Arenaria nuttallii, Calochortus apiculatus, Hydrophyllum capitatum, Lewisia pygmaea, Mimulus lewisii, Nemophila breviflora*, and *Taxus brevifolia*.

A second large group includes those plants that extend from the Pacific coast eastward to the cordillera of Alberta. Many of these plants occur in Banff and Jasper National Parks. Examples are: *Crataegus douglasii, Cypripedium montanum, Geranium erianthum, Luetkea pectinata, Lupinus nootkatensis, Montia parviflora, Osmorhiza purpurea*, and *Thuja plicata*. *Crataegus douglasii* also has a disjunct population in eastern North America and appears on the List of the Rare Vascular Plants of Ontario.

From the north a large number of plants of Arctic or northern Boreal affinities extend southward into Alberta. Some of these, such as *Dryopteris fragrans, Gentianella detonsa* ssp. *raupii* and *Potentilla yukonensis* spread across northernmost Alberta in the boreal forest. Others, such as *Arenaria humifusa, Carex glacialis, Draba fladnizensis* and *Pedicularis kanei*, extend down the cordillera as more or less continuous populations, while still others, such as *Carex misandra, Eriophorum callitrix* and *Erysimum pallasii*, occur as distinctly disjunct populations in the cordillera of Alberta. Some plants such as *Pedicularis flammea* are also disjunct in the east and are rare in Ontario.

A few plants with their major range in the eastern boreal forest extend across Canada into northeastern-most Alberta. Examples are: *Cypripedium acaule, Sagina nodosa, Sarracenia purpurea* and *Utricularia cornuta*. Usually these plants are narrowly restricted ecologically as well as becoming less common as they reach their western limits.

Along the southern border of the province there are many plants with Great Plains affinities that occur on the dry prairie. *Asclepias viridiflora, Astragalus kentrophyta, A. lotiflorus, Atriplex powellii, Eriogonum cernuum* and *Phlox alyssifolia* are some examples. Some plants in this group have small ranges outside of Alberta. *Oxytropis lagopus* var. *conjugans*, of badland habitats in the Cardston area of southwestern Alberta, occurs elsewhere only in adjacent Montana. *Oenothera caespitosa* var. *psammophila* ranges into Idaho and it is regarded to be endangered in the United States (United States 1976).

Superimposed on these floristic patterns are distributional patterns produced by the habitat tolerances of certain plants. We are not in a position to analyze these patterns completely, but it is evident that some plants are rare because of their narrow habitat tolerance and the restricted nature of these habitats. Examples of such rarities include the bog species *Utricularia cornuta;* and active sand dune plants *Elymus mollis, Salix tyrrellii* and *Tanacetum huronense* var. *bifarium;* the high alpine plants *Antennaria alpina* var. *media* and *Papaver pygmaeum; Boisduvalia glabella* of the dry mud flats on the prairies; plants of calcareous cliffs, *Cheilanthes feei, Pellaea atropurpurea* and *Woodsia glabella* and those on cliffs at high altitudes, *Adiantum pedatum* var. *aleuticum;* hot springs plants, *Panicum occidentale;* and those of rocky marl shores such as *Carex athabascensis*.

When distribution maps are available for all of the rare plants of Alberta it will be possible to detect centres of rare plants. However, even the superficial review that we have made shows that there are centres of rare plants in the southwestern corner of the province, the dry prairies along the southern border, in the cordillera, in the northeastern corner and in some other unique regions within the Boreal Forest zone. Further study will be necessary for a full appreciation of the significance of these centres and a systematic correlation of these centres with existing parks, wilderness areas, ecological reserves and other protected areas will give some appreciation of the scope of the problem posed by the rare plants of Alberta.

I. Acknowledgements

We thank the following individuals for their contributions to the list. C.D. Bird, University of Calgary; W.G. Dore, Agriculture Canada; J.M. Gillett, Museum of Natural Sciences; E. Haber, Museum of Natural Sciences; B. Hallworth, University of Calgary; L. Kershaw, University of Alberta; J.K. Morton, University of Waterloo; G.A. Mulligan, Agriculture Canada; G. Pegg, Glenevis, Alberta; G.W. Scotter, Canadian Wildlife Service, Edmonton; C. Wallis, Alberta Dept. of Recreation Parks and Wildlife, Provincial Parks Division, Edmonton; and J.F. Weir, Manitoba Department of Agriculture, Horticulture Section, Winnipeg. We would like to particularly thank Dr. John Packer for making the University of Alberta Herbarium collections available to us and for providing access to some unpublished distribution maps; and Miss Madeleine Dumais for her keen interest in the project and for providing us with annotated distribution maps based on the University of Alberta Herbarium map collection.

ADDENDUM

The symbol "†" indicates that there is a map of the United States Great Plains distribution of the plant in McGregor & Barkley (1977).

LIST OF THE RARE VASCULAR PLANTS OF ALBERTA

Abronia micrantha Torr.
REFERENCE: CAN, DAO; Boivin 1967, Boivin 1967–72, Kershaw 1976, Packer & Dumais 1972 and map
RANGE: sAlta; s to eMont–Nev–NM–SD
ALBERTA: Milk River
MAP: Booth & Wright 1959 Montana, Johnson & Hallworth 1965 sAlta
HABITAT: Loose alluvial sands
STATUS: Rare in Canada.

Adenocaulon bicolor Hook.
REFERENCE: ALTA, CAN, UAC; Boivin 1967–72, Moss 1959, Ogilvie 1962, Packer 1975–77 and map
RANGE: sBC–swAlta, Ont; s to Cal–nwMont, nMinn–nMich
ALBERTA: Locally common at Waterton Lakes National Park
MAP: Fernald 1935
HABITAT: Damp thickets and woods
STATUS: Rare in Ontario.

Adiantum pedatum L. var. **aleuticum** Rupr.
REFERENCE: ALTA, DAO; Boivin 1967–72, Moss 1959, Ogilvie 1962 and map
RANGE: Alas, BC–swAlta, Que, Nfld; s to Cal & Wyo, Utah, Okla, scattered in east
ALBERTA: Waterton Lakes National Park
MAP: Hultén 1968, Taylor 1970 Pacific NW
HABITAT: On cliffs and among boulders at high altitudes
STATUS: Rare in Wyoming and Colorado.

Agoseris grandiflora (Nutt.) Greene
REFERENCE: DAO; Packer & Dumais 1972
RANGE: swBC–wcAlta; s to Cal–clda
ALBERTA: Craigmyle
MAP: Booth & Wright 1959 Montana
HABITAT: Lowland meadows

Agropyron scribneri Vasey
REFERENCE: ALTA, DAO, UAC; Kershaw 1976, Packer 1975–77
RANGE: sBC–wAlta; s to Cal–NM
ALBERTA: Waterton Lakes National Park and Kananaskis
HABITAT: Dry alpine slopes
STATUS: Rare in Idaho and California.

Agropyron violaceum (Hornem.) Lange ssp. **andinum** (Scribn. & Sm.) Melderis
REFERENCE: CAN; Packer & Dumais 1972, Porsild 1959 and map
RANGE: Alas–YT, BC–wAlta–swSask; Mont, scattered southward in Rocky Mts
ALBERTA: Banff National Park
MAP: Hultén 1968
HABITAT: Mountains

Agrostis borealis Hartm.
REFERENCE: CAN; Packer 1975–77 and map
RANGE: Alas–NWT,wAlta–Man, Que, Nfld–Lab; s to Wash–Utah–Colo, s to NC
ALBERTA: Jasper National Park (Mount Edith Cavell)
MAP: Hitchcock & Chase 1950 US, Porsild 1964 Can, Raup 1930 Can
HABITAT: Slopes and banks at high altitudes
STATUS: Endangered in North Carolina and rare in Wyoming.

Agrostis humilis Vasey
REFERENCE: CAN, DAO; Kershaw 1976, Packer & Dumais 1972, Porsild 1959
RANGE: BC–swAlta; s to Nev–Colo
ALBERTA: Jasper National Park (Mount Edith Cavell) and Banff National Park
MAP: Hitchcock & Chase 1950 US
HABITAT: Subalpine to alpine meadows, streambanks and moist slopes

Allium geyeri Wats.
REFERENCE: ALTA, CAN, DAO; Moss 1959, Ogilvie 1962 and maps
RANGE: BC–swAlta–Sask; s to Ariz–Tex–nSD
ALBERTA: Waterton Lakes National Park, Calgary and Beaverlodge
MAP: Ownbey and Aase 1955, Univ. of Alta 1975
HABITAT: Wet meadows and along streams
STATUS: Rare in Saskatchewan. Rare in Oregon.

Ambrosia acanthicarpa Hook.
(*Franseria acanthicarpa* (Hook.) Cov.)
REFERENCE: ALTA, CAN, DAO; Kershaw 1976
RANGE: seAlta–swMan; s in Wash–Cal–Tex (introduced in east)
ALBERTA: Milk River and Manyberries
MAP: Booth & Wright 1959 Montana, †
HABITAT: Sand dunes

Androsace occidentalis Pursh
REFERENCE: DAO; Wallis 1977
RANGE: BC–sAlta–wOnt; s in wMont–sCal–NM–Mississippi Valley
ALBERTA: Lacombe
MAP: †
HABITAT: Dry, usually sandy ground
STATUS: Endangered in Indiana and rare in Iowa.

Anemone nemorosa L. var. **bifolia** (Farwell) Boivin
(*A. quinquefolia* L. var. *interior* Fern.)
REFERENCE: ALTA, DAO; Kershaw 1976 and map
RANGE: wAlta–wQue; Great Lakes–Ky
ALBERTA: Nordegg
MAP: Univ. of Alta 1975
HABITAT: Woods
STATUS: Rare in Saskatchewan.

Anemone quinquefolia var. **interior** = **A. nemorosa** var. **bifolia**

Angelica dawsonii Wats.
REFERENCE: CAN, DAO; Kershaw 1976. Ogilvie 1962
RANGE: seBC–swAlta; s to Ida–nwMont
ALBERTA: Waterton Lakes National Park (locally common), Crowsnest Forest Reserve and Blairmore
HABITAT: Moist meadows and woods along streams

Antennaria acuta Rydb.
REFERENCE: CAN, DAO; Boivin 1967
RANGE: BC–wAlta
ALBERTA: Banff National Park

Antennaria alpina (L.) Gaertn. var. **media** (Greene) Jeps.
(*A. media* Greene)
REFERENCE: CAN, DAO; Boivin 1967–72 and map
RANGE: NWT, swAlta, nQue, Lab; s to Cal–Colo
ALBERTA: Banff National Park (locally common) and Jasper National Park
MAP: Hultén 1968
HABITAT: High altitudes in mountains

Antennaria angustata Greene
(*A. monocephala* DC. ssp. *angustata* (Greene) Hult.)
REFERENCE: ALTA, CAN, DAO; Kershaw 1976, Packer & Dumais 1972 and maps
RANGE: Alas–NWT, seBC–wAlta, Que–Lab
ALBERTA: Banff and Jasper National Parks
MAP: Hultén 1968, Porsild 1964, Porsild 1965
HABITAT: Non–calcareous, gravelly or rocky places

Antennaria corymbosa E. Nels.
REFERENCE: ALTA, DAO
RANGE: seAlta–swSask; s to Utah–Colo
ALBERTA: Cypress Hills Provincial Park
HABITAT: Open woods
STATUS: Rare in Saskatchewan

Antennaria luzuloides T. & G.
REFERENCE: ALTA, DAO, UAC; Boivin 1967–72, Ogilvie 1962 and map
RANGE: sBC–wAlta; s to nCal–nColo
ALBERTA: Banff and Waterton Lakes National Parks
MAP: Booth & Wright 1959 Montana, Univ. of Alta 1975
HABITAT: Open places in mountains

Antennaria media = A. alpina var. **media**

Antennaria monocephala ssp. **angustata = A. angustata**

Antennaria monocephala DC. ssp. **monocephala**
REFERENCE: DAO; Packer & Dumais 1972 and map
RANGE: Alas–NWT, eBC–swAlta, wOnt
ALBERTA: Banff and Jasper National Parks and Willmore Wilderness Provincial Park
MAP: Hultén 1968, Porsild 1950, Raup 1947

Aquilegia jonesii Parry
REFERENCE: ALTA, CAN, DAO; Kershaw 1976, Ogilvie 1962, Packer 1975–77 and map
RANGE: swAlta; s to nwWyo
ALBERTA: Waterton Lakes National Park
MAP: Booth & Wright 1959 Montana, Univ. of Alta 1975
HABITAT: High, rocky alpine places
STATUS: Rare in Canada. Threatened in the United States (Smithsonian Institution 1975), rare in Montana and Wyoming.

Arenaria humifusa Wahl.
REFERENCE: CAN; Packer & Dumais 1972, Porsild 1959 and maps
RANGE: Alas–NWT, BC–wAlta, nMan–Que, Nfld–Lab
ALBERTA: Banff and Jasper National Parks
MAP: Hultén 1958, Hultén 1968, Porsild 1964, Raup 1947, Raymond 1950
HABITAT: Gravelly alpine ledges
STATUS: Rare in Ontario.

Arenaria nuttallii Pax
REFERENCE: ALTA, CAN; Kershaw 1976, Ogilvie 1962 and map
RANGE: BC–swAlta; s to Cal–Wyo
ALBERTA: Waterton Lakes National Park (locally common) to Crowsnest Pass
MAP: Booth & Wright 1959 Montana, Univ. of Alta 1975
HABITAT: Dry alpine ridges

Aristida longiseta Steudel var. **robusta** Merr.
REFERENCE: ALTA, CAN, DAO; Moss 1959
RANGE: sBC–seAlta–sMan; s to Ariz–Tex–Iowa
ALBERTA: St. Kilda and Lethbridge
MAP: Hitchcock & Chase 1950 US, †
HABITAT: Dry plains
STATUS: Rare in Saskatchewan. Rare in Iowa.

Arnica alpina (L.) Olin ssp. **angustifolia** (M. Vahl) Maguire
REFERENCE: CAN; Moss 1959, Porsild 1959 and maps
RANGE: Alas–NWT, BC–swAlta, nSask–Man, nOnt, Que
ALBERTA: Banff National Park (locally common) and Jasper National Park
MAP: Hultén 1958, Hultén 1968, Maguire 1943, Porsild 1964
HABITAT: Alpine
STATUS: Rare in Ontario.

Arnica parryi Gray
REFERENCE: ALTA, CAN, DAO, UAC; and maps
RANGE: sBC–wAlta; s to Cal–Colo
ALBERTA: Banff National Park (locally common) and Waterton Lakes National Park
MAP: Hultén 1968, Maguire 1943, Univ. of Alta 1975
HABITAT: Open woods

Artemisia borealis = A. campestris ssp. **borealis**

Artemisia campestris L. ssp. **borealis** (Pall.) Hall & Clements
(*A. borealis* Pall.)
REFERENCE: ALTA, CAN, UAC; Packer & Dumais 1972, Weir 1974 and maps
RANGE: Alas–NWT, BC–w&neAlta–nwSask, nOnt–Que, Nfld–Lab; s to nWash–nMont
ALBERTA: Waterton Lakes National Park, Mountain Park, Plateau Mountain and Maybelle River
MAP: Hultén 1968, Porsild 1964
HABITAT: Plains, hills, mountain slopes and active sand dunes

Artemisia tridentata Nutt.
REFERENCE: ALTA, UAC; Moss 1959, Ogilvie 1962 and maps
RANGE: sBC–swAlta; s to sCal–NM–ND
ALBERTA: Waterton Lakes National Park to Crowsnest
MAP: Beetle 1960 US, Daubenmire 1942 US, Little 1976, Ward 1953
HABITAT: Dry prairie slopes

Asclepias viridiflora Raf.
REFERENCE: ALTA, DAO, UAC; Moss 1959
RANGE: sBC–seAlta–Ont; s to Ariz–Tex–Ga–NY
ALBERTA: Writing-on-Stone Provincial Park to Milk River (locally common)
MAP: Booth & Wright 1959 Montana, Woodson 1954, †
HABITAT: Dry prairie hillsides
STATUS: Rare in Ontario.

Aster maccallae Rydb.
REFERENCE: DAO; Packer & Dumais 1972, Porsild 1959
RANGE: seBC–swAlta
ALBERTA: Banff and Jasper National Parks and Crowsnest
HABITAT: Near mountain streams

Aster pauciflorus Nutt.
REFERENCE: ALTA, CAN, DAO; and map
RANGE: NWT, eAlta–Man; s to Ariz–Tex
ALBERTA: Medicine Hat, Oyen and Heart Lake
MAP: Univ. of Alta 1975, †
HABITAT: Saline soil

Aster tanacetifolius = Machaeranthera tanacetifolia

Astragalus kentrophyta Gray
REFERENCE: ALTA, CAN, DAO, UAC; Kershaw 1976 and maps
RANGE: sAlta–swSask; wOre s to Cal–NM–Mont
ALBERTA: Writing-on-Stone Provincial Park, Belly River and Medicine Hat
MAP: Barneby 1964, Univ. of Alta 1975, †
HABITAT: Eroded banks and slopes
STATUS: Rare in Canada.

Astragalus lotiflorus Hook.
REFERENCE: ALTA, CAN, DAO; Moss 1959 and map
RANGE: BC–sAlta–swMan; s in Mont–Tex–Mo–Minn
ALBERTA: Turin, Medicine Hat and Milk River
MAP: Barneby 1964, Welsh 1960, †
HABITAT: Dry slopes and prairie
STATUS: Rare in Iowa and Missouri.

Astragalus purshii Dougl. var. **purshii**
REFERENCE: ALTA, CAN, DAO; and maps
RANGE: sBC–sAlta–sSask; s to Cal–Colo–ND
ALBERTA: Manyberries and Medicine Hat
MAP: Barneby 1964, Univ. of Alta 1975, †
HABITAT: Dry hillsides and plains
STATUS: Rare in Saskatchewan.

Athyrium alpestre = A. distentifolium ssp. **americanum**

Athyrium distentifolium Taush. ssp. **americanum** (Butters) Hult.
(*A. alpestre* (Hoppe) Rylands)
REFERENCE: ALTA, CAN, UAC; Moss 1959 and map
RANGE: Alas, BC–wAlta, seQue, Nfld; s to Cal–Colo
ALBERTA: Jasper National Park (Mount Edith Cavell) and Waterton Lakes National Park
MAP: Hultén 1968, Taylor 1970 Pacific NW
HABITAT: Rocky places and moist alpine meadows
STATUS: Rare in Colorado.

Atriplex aptera A. Nels.
(*A. canescens* (Pursh) Nutt. var. *aptera* (A. Nels.) C. L. Hitchc.)
REFERENCE: DAO; Kershaw 1976
RANGE: sAlta; s to ecMont
ALBERTA: Onefour, East Coulee and Verdigris Coulee
HABITAT: Saline soils
STATUS: Rare in Canada.

Atriplex canescens var. **aptera = A. aptera**

Atriplex powellii Wats.
REFERENCE: ALTA; Kershaw 1976, Packer 1975–77 and map
RANGE: sAlta–sSask; Ore s to Ariz–SD
ALBERTA: Rosedale
MAP: Frankton & Bassett 1970
HABITAT: Badlands
STATUS: Rare in Saskatchewan

Atriplex truncata (Torr.) Gray
REFERENCE: ALTA, DAO; Packer 1975–77 and map
RANGE: BC–seAlta–sSask; s to Cal–Colo, Mo
ALBERTA: Cypress Hills Provincial Park (locally common) to Wild Horse
MAP: Frankton & Bassett 1970
HABITAT: Alkaline soil

Bahia oppositifolia (Nutt.) Rydb.
REFERENCE: Boivin 1967–72
RANGE: sAlta–swSask
ALBERTA: Lethbridge
MAP: Ellison 1964 US
HABITAT: Alkaline soil in prairie
STATUS: Rare in Saskatchewan.

Balsamorhiza sagittata (Pursh) Nutt.
REFERENCE: ALTA, CAN, DAO, UAC; Ogilvie 1962 and map
RANGE: sBC–swAlta; s to sCal–Colo–Black Hills of SD
ALBERTA: Waterton Lakes National Park (locally common), Cardston and Coleman
MAP: Helton et al. 1972
HABITAT: Prairie grassland and open woods
STATUS: Rare in the Sweetgrass Hills, Montana.

Boisduvalia glabella (Nutt.) Walpers
REFERENCE: ALTA, CAN, DAO; Boivin 1967–72, Kershaw 1976 and map
RANGE: BC–eAlta–swSask; s to Cal–Utah–Dakotas
ALBERTA: Cypress Hills Provincial Park, Medicine Hat and Empress
MAP: Raven & Moore 1965
HABITAT: Dry mud flats on prairie

Botrychium boreale (Fries) Milde
REFERENCE: ALTA, CAN, DAO; Packer & Dumais 1972, Porsild 1959 and maps
RANGE: Alas–YT, BC–swAlta; s to neOre, neNev, Colo
ALBERTA: Banff National Park, Brazeau National Forest, Willmore Wilderness Provincial Park and Cadomin
MAP: Clausen 1938, Hultén 1968, Taylor 1970 Pacific NW
HABITAT: Open grassy places, alpine meadows and peaty ground
STATUS: Rare in Colorado and Oregon, uncommon in Washington.

Botrychium lanceolatum (Gmelin) Rupr. var. **lanceolatum**
REFERENCE: CAN, DAO; Porsild 1959 and maps
RANGE: Alas–YT, BC–wAlta–swSask, Que–NS, Lab; s to Ore, Utah, Wyo–Colo
ALBERTA: Banff National Park
MAP: Clausen 1938, Hultén 1968, Porsild 1966 Can, Taylor 1970 Pacific NW
HABITAT: Peaty slopes, open sandy places, alpine meadows and open woods
STATUS: Rare in Ontario and Nova Scotia. Rare in Washington, Oregon, Utah and Wyoming.

Braya purpurascens (R. Br.) Bunge
REFERENCE: ALTA, CAN; Kershaw 1976, Packer & Dumais 1972, Weir 1974 and maps
RANGE: Alas–NWT,wAlta, Que, Lab
ALBERTA: Willmore Wilderness Provincial Park to Cadomin
MAP: Hultén 1968, Hultén 1971, Packer & Vitt 1974, Porsild 1964
HABITAT: Calcareous clay and gravel barrens

Brickellia grandiflora (Hook.) Nutt.
REFERENCE: ALTA, CAN, DAO, UAC; Kershaw 1976, Ogilvie 1962
RANGE: swAlta; s to Cal–NM, e to Neb–Ark–Mo
ALBERTA: Locally common at Waterton Lakes National Park
MAP: Booth & Wright 1959 Montana, †
HABITAT: Eroded slopes and rocky banks in mountains
STATUS: Rare in Canada.

Bromus purgans L.
REFERENCE: CAN, DAO; Moss 1959, Packer 1975–77 and map
RANGE: NWT, c&wAlta–NB; s to Wyo–Ark–Va
ALBERTA: Banff and Waterton Lakes National Parks and Edmonton
MAP: Hitchcock & Chase 1950 US, Wagnon 1952
HABITAT: Moist thickets and woods
STATUS: Rare in Wyoming.

Bupleurum americanum C. & R.
(*B. triradiatum* Adams ssp. *arcticum* (Regel) Hult.)
REFERENCE: ALTA, CAN, DAO; Packer 1975–77 and maps
RANGE: Alas–NWT, seBC–swAlta; s to elda–wcWyo
ALBERTA: Waterton Lakes National Park (locally common) to Cardston
MAP: Booth & Wright 1959 Montana, Hultén 1968, Porter 1946 Wyoming, Univ. of Alta 1975
HABITAT: Dry hillsides and meadows

Bupleurum triradiatum ssp. **arcticum = B. americanum**

Calamagrostis lapponica (Wahl.) Hartm. var. **nearctica** Pors.
REFERENCE: ALTA, CAN, DAO, UAC; Moss 1959 and maps
RANGE: Alas–NWT, wAlta, Man–Que
ALBERTA: Clearwater Forest Reserve and Cadomin
MAP: Hultén 1964a, Hultén 1968, Porsild 1964, Raup 1947, Young 1971

Calochortus apiculatus Baker
REFERENCE: CAN, DAO, UAC; Kershaw 1976, Ogilvie 1962 and maps
RANGE: BC–swAlta; s to neWash–nwMont
ALBERTA: Waterton Lakes National Park to Crowsnest
MAP: Ownbey 1940, Univ. of Alta 1975
HABITAT: Dry slopes

Camissonia andina (Nutt.) Raven
(*Oenothera andina* Nutt.)
REFERENCE: ALTA, DAO; Boivin 1967–72, Kershaw 1976, Moss 1959
RANGE: sBC–seAlta; s to Cal–Utah–Wyo
ALBERTA: Manyberries
MAP: Munz 1946 Wyoming
HABITAT: Dry slopes, flats and depressions in prairie

Camissonia breviflora (T. & G.) Raven
(*Oenothera breviflora* T. & G.)
REFERENCE: ALTA, CAN; Boivin 1967–72, Kershaw 1976, Moss 1959
RANGE: sBC–seAlta–swSask; s to nCal–Wyo
ALBERTA: Cypress Hills Provincial Park, Handhills Lake and Milk River
MAP: Booth & Wright 1959 Montana, Munz 1946 Wyoming
HABITAT: Clay flats
STATUS: Rare in Saskatchewan.

Cardamine parviflora L. var. **arenicola** (Britt.) O. E. Schulz

REFERENCE: ALTA, DAO; Moss 1959

RANGE: sBC–nwAlta, Ont–NS; s to Ore, Minn–Wis, s to Fla, w to Tex

ALBERTA: Notikewin and Touchwood Lake

MAP: †

HABITAT: Dry woods, shaded or exposed ledges and sandy soils

Cardamine pratensis L. var. **palustris** Wimm. & Grab.

REFERENCE: ALTA; Moss 1959

RANGE: NWT, BC–ncAlta–Que, NS–Lab; s to Great Lakes–Va

ALBERTA: Hondo, McMurray Highway and Pembina River

HABITAT: Bogs and swamps

STATUS: Rare in Nova Scotia. Endangered in Indiana, threatened in Wisconsin and rare in Illinois.

Carex athabascensis F. J. Hermann

REFERENCE: ALTA, UAC; Kershaw 1976, Moss 1959

RANGE: wAlta:endemic

ALBERTA: Jasper National Park and Sheep River

HABITAT: Rocky marl shores

STATUS: Rare in Canada.

Carex eleusinoides = C. eurystachya

Carex enanderi = C. eurystachya

Carex eurystachya F. J. Hermann

(*C. eleusinoides* Turcz., *C. enanderi* Hult.)

REFERENCE: ALTA, CAN, DAO; Hudson 1972, Kershaw 1976, Moss 1959

RANGE: Alas–YT, wAlta

ALBERTA: Jasper National Park (Mount Edith Cavell) and Banff National Park

MAP: Hultén 1968, Porsild 1966

HABITAT: Clay–gravel outwash on mountain lakes

Carex glacialis Mack.

REFERENCE: DAO; Packer & Dumais 1972, Porsild 1959 and maps

RANGE: Alas–NWT, BC–wAlta–Que, Nfld–Lab

ALBERTA: Banff National Park

MAP: Hudson 1977 Sask, Hultén 1964a, Hultén 1968, Porsild 1964

HABITAT: Dry calcareous soil

STATUS: Rare in Saskatchewan.

Carex gymnoclada Holm.

(*C. scopulorum* Holm.)

REFERENCE: ALTA, CAN, DAO, UAC; Kershaw 1976, Moss 1959 and map

RANGE: YT, sBC–wAlta; s to Cal–Colo

ALBERTA: Coleman, Highwood Pass and Mountain Park

MAP: Hultén 1968

HABITAT: Moist ground

Carex illota Bailey

REFERENCE: CAN, DAO; Kershaw 1976, Scotter & Hudson 1975

RANGE: sBC–wAlta; s to Cal–Colo

ALBERTA: Banff, Jasper and Waterton Lakes National Parks

HABITAT: Wet places in mountains

Carex maritima Gunn. var. **maritima**

REFERENCE: ALTA; Kershaw 1976, Moss 1959

RANGE: Alas–NWT, BC, cAlta, Man–Que, Nfld–Lab

ALBERTA: Edmonton

MAP: Hudson 1977 Sask, Meusel et al. 1965, Porsild 1964

STATUS: Rare in Saskatchewan.

Carex mertensii Pres.

REFERENCE: ALTA, CAN, DAO; Moss 1959, Packer 1975–77 and map

RANGE: Alas, BC–swAlta; s to nCal–wMont

ALBERTA: North Kootenay Mountain to Carbondale River

MAP: Hultén 1968

HABITAT: Banks and slopes in mountains

Carex misandra R.Br.

REFERENCE: ALTA, CAN; Kershaw 1976, Packer & Dumais 1972 and maps

RANGE: Alas–NWT, BC–wAlta, Que, Lab; disj Colo, Utah

ALBERTA: Jasper National Park and Cheviot Mountain

MAP: Hultén 1964a, Hultén 1968, Packer & Vitt 1974, Porsild 1964 Can, Young 1971

HABITAT: Meadows and open slopes above timberline

Carex paysonis Clokey

REFERENCE: ALTA, DAO; Kershaw 1976, Kuijt 1973

RANGE: swAlta; s to Nev–wWyo

ALBERTA: Waterton Lakes National Park

HABITAT: Moist meadows and open rocky slopes in mountains

STATUS: Rare in Canada.

Carex petricosa Dew.

REFERENCE: DAO; Wallis 1977 and maps

RANGE: Alas–NWT, BC–wAlta

ALBERTA: Jasper National Park (Athabasca Glacier)

MAP: Hultén 1968, Porsild 1964

HABITAT: Alpine slopes and summits

Carex scopulorum = C. gymnoclada

Carex supina Willd. ssp. **spaniocarpa** (Steud.) Hult.

REFERENCE: DAO; Packer & Dumais 1972

RANGE: Alas–NWT, BC–nwAlta–Ont, Que; Minn

ALBERTA: Peace River

MAP: Hudson 1977 Sask, Hultén 1964a, Hultén 1968, Porsild 1964 Can

STATUS: Rare in Saskatchewan and Ontario.

Carex trisperma Dew.
REFERENCE: ALTA, CAN, DAO; Moss 1959
RANGE: BC-cAlta-Lab; Great Lakes-eUS
ALBERTA: Elk Island National Park, Fort Saskatchewan and Swan Hills
MAP: Hudson 1977 Sask
HABITAT: Bogs and wet woods
STATUS: Rare in Saskatchewan. Endangered in North Carolina.

Castilleja cusickii Greenm.
REFERENCE: CAN, DAO, UAC; Kershaw 1976
RANGE: sBC-swAlta; s to neOre-nwWyo-wMont
ALBERTA: Waterton Lakes National Park, Cardston and Calgary
HABITAT: Mountain slopes and fescue prairie grasslands

Castilleja pallescens (Gray) Greenm.
REFERENCE: CAN; Kershaw 1976
RANGE: sBC-swAlta; s to nelda, Wyo-wMont
ALBERTA: Waterton Lakes National Park and Calgary
MAP: Booth & Wright 1959 Montana
HABITAT: Dry plains and hills

Ceanothus velutinus Dougl.
REFERENCE: ALTA, CAN, DAO, UAC; Ogilvie 1962, Packer 1975-77 and map
RANGE: BC-swAlta; s to Cal-Colo, SD
ALBERTA: Waterton Lakes National Park and Crowsnest Pass
MAP: Booth & Wright 1959 Montana, Porter 1944 Wyoming, Univ. of Alta 1975
HABITAT: Mountain slopes
STATUS: Rare in the Sweetgrass Hills, Montana.

Centunculus minimus L.
REFERENCE: ALTA, DAO; Boivin 1967-72 and map
RANGE: sBC-eAlta-swSask, NS; widespread US
ALBERTA: Empress and Redcliff
MAP: Booth & Wright 1959 Montana, Hultén 1958, Univ. of Alta 1975, †
HABITAT: Moist soil and mud on pond margins
STATUS: Rare in Nova Scotia and Saskatchewan.

Cheilanthes feei Moore
REFERENCE: CAN, DAO, UAC; Kershaw 1976, Moss 1959
RANGE: BC-wAlta; s to Cal-Tex-Ill-Minn
ALBERTA: Banff National Park, Entrance Provincial Park, Kananaskis and Cochrane
MAP: Taylor 1970 Pacific NW, †
HABITAT: Crevices on dry calcareous cliffs
STATUS: Endangered in Minnesota and rare in Oregon and Iowa.

Cheilanthes gracillima D. C. Eat.
REFERENCE: Kuijt 1973
RANGE: sBC-swAlta; s to Cal-Mont
ALBERTA: Waterton Lakes National Park
MAP: Taylor 1970 Pacific NW
HABITAT: Crevices and ledges on igneous cliffs

Chrysanthemum bipinnatum ssp. **huronense = Tanacetum huronense**

Chrysothamnus nauseosus (Pall.) Britt.
REFERENCE: DAO; Ogilvie 1962
RANGE: BC-swAlta-seSask; s to Cal-Tex
ALBERTA: Cypress Hills Provincial Park and St. Kilda
MAP: Booth & Wright 1959 Montana, Daubenmire 1942 US, †
HABITAT: Open dry places

Cirsium hookerianum var. **scariosum = C. scariosum**

Cirsium scariosum Nutt.
(*C. hookerianum* Nutt. var. *scariosum* (Nutt.) Boivin)
REFERENCE: ALTA, CAN, DAO; and maps
RANGE: seBC-swAlta, Que; s to nNev-wWyo
ALBERTA: Waterton Lakes National Park, Cardston and Crowsnest
MAP: Moore & Frankton 1967, Moore & Frankton 1974 Can
HABITAT: Woods and open places in foothills and mountains

Claytonia linearis = Montia linearis

Claytonia parviflora = Montia parviflora

Conimitella williamsii (D. C. Eat.) Rydb.
REFERENCE: ALTA, CAN, DAO, UAC; Kershaw 1976, Ogilvie 1962, Packer & Dumais 1972
RANGE: swAlta; s to elda-Colo-Mont
ALBERTA: Cardston to Crowsnest
MAP: Booth & Wright 1959 Montana
HABITAT: Rock crevices, moist cliffs and open montane slopes
STATUS: Rare in Canada. Rare in Colorado and in the Sweetgrass Hills, Montana.

Crataegus douglasii Lindl.
REFERENCE: ALTA, CAN, DAO, UAC; Ogilvie 1962 and maps
RANGE: Alas, BC-sAlta-Sask, wOnt; s to Cal-NM-Mont, Minn-Mich
ALBERTA: Waterton Lakes National Park and Cypress Hills Provincial Park
MAP: Hultén 1968, Little 1976
HABITAT: Slopes, stream banks and lake shores
STATUS: Rare in Saskatchewan and Ontario. Endangered in Minnesota, rare in Michigan.

Crepis atrabarba Heller
REFERENCE: ALTA, CAN; Kershaw 1976, Ogilvie 1962 and map
RANGE: sBC-wAlta-swSask; s to cNev-cColo
ALBERTA: Banff and Waterton Lakes National Parks
MAP: Booth & Wright 1959 Montana, Univ. of Alta 1975
HABITAT: Dry open places in mountains
STATUS: Rare in Saskatchewan.

Cryptantha affinis (Gray) Greene
REFERENCE: CAN; Kershaw 1976
RANGE: sBC-swAlta; s to Cal-Wyo
ALBERTA: Banff National Park
MAP: Booth & Wright 1959 Montana
HABITAT: Open or thinly wooded slopes

Cypripedium acaule Ait.
REFERENCE: ALTA, CAN; and maps
RANGE: NWT, neAlta–Nfld; s to Minn–Ala–Me
ALBERTA: Richardson River and north shore of Lake Athabasca
MAP: Luer 1975, Univ. of Alta 1975
HABITAT: Bogs, woods and sand dunes
STATUS: Endangered in Vermont, threatened in Alabama and rare in Illinois and Rhode Island.
PROTECTION: An export permit is required under the Convention on International Trade in Endangered Species of Wild Fauna and Flora (Canada 1973, 1975) ratified by Canada and the United States. Protected by law in Minnesota, Wisconsin, Michigan, New York and Vermont.

Cypripedium montanum Dougl.
REFERENCE: ALTA, CAN, UAC; Kuijt 1973, Ogilvie 1962 and maps
RANGE: Alas, BC–swAlta; s to Cal–Wyo
ALBERTA: Waterton Lakes National Park
MAP: Hultén 1968, Luer 1975, Univ. of Alta 1975
HABITAT: Moist woods
STATUS: Threatened in Washington, rare in Oregon.
PROTECTION: An export permit is required under the Convention on International Trade in Endangered Species of Wild Fauna and Flora (Canada 1973, 1975) ratified by Canada and the United States.

Disporum hookeri var. **oreganum = D. oreganum**

Disporum oreganum Wats.
(*D. hookeri* (Torr.) Britt. var. *oreganum* (Wats.) Q. Jones)
REFERENCE: ALTA, DAO; Ogilvie 1962 and maps
RANGE: BC–swAlta; s to Ore–wMont
ALBERTA: Waterton Lakes National Park (locally common) to Castle River
MAP: Jones 1951, Univ. of Alta 1975
HABITAT: Moist woods

Douglasia montana Gray
REFERENCE: DAO; Kershaw 1976, Ogilvie 1962, Packer 1975–77 and map
RANGE: swAlta; s to Ida–nWyo
ALBERTA: Waterton Lakes National Park
MAP: Booth & Wright 1959 Montana, Univ. of Alta 1975
HABITAT: Dry places in foothills and mountains
STATUS: Rare in Canada. Rare in Idaho.

Downingia laeta Greene
REFERENCE: ALTA, DAO; Boivin 1967–72, Kershaw 1976, Moss 1959 and map
RANGE: scAlta–swSask; s to Cal–Utah–wMont
ALBERTA: Foremost and Medicine Hat
MAP: McVaugh 1941
HABITAT: Mud and shallow water
STATUS: Rare in Canada.

Draba densifolia Nutt.
(*D. stenopetala* auct.)
REFERENCE: CAN, DAO; Mulligan 1975, Packer & Dumais 1972, Porsild 1959 and maps
RANGE: Alas, BC–wAlta; s to Cal–wWyo
ALBERTA: Banff to Waterton Lakes National Parks
MAP: Hultén 1968, Porsild 1966 Can, Univ. of Alta 1975
HABITAT: Scree slopes

Draba fladnizensis Wulf.
(*D. lactea* auct.)
REFERENCE: CAN, UAC; Kershaw 1976, Mulligan 1975 and maps
RANGE: Alas–NWT, BC–wAlta, nMan, Que, Lab; s to Mont–Colo–Utah
ALBERTA: Banff National Park and Mountain Park
MAP: Hultén 1958, Hultén 1968, Mulligan 1974 Can, Porsild 1964 Can, Univ. of Alta 1975
HABITAT: Scree slopes
STATUS: Rare in Colorado.

Draba glabella Pursh
(*D. hirta* auct.)
REFERENCE: DAO; Mulligan 1975, Packer & Dumais 1972 and maps
RANGE: Alas–NWT, BC–wAlta, Man–NB, NS–Lab; disj Wyo, Colo
ALBERTA: Jasper National Park (Columbia Icefield)
MAP: Hultén 1968, Mulligan 1970a Can, Porsild 1964 Can, Univ. of Alta 1975
HABITAT: Dry stony places in mountains
STATUS: Rare in Ontario and Nova Scotia. Rare in Wyoming and Colorado.

Draba hirta = D. glabella

Draba kananaskis G. A. Mulligan
REFERENCE: DAO; Kershaw 1976, Mulligan 1970b, Packer & Dumais 1972, Weir 1974
RANGE: swAlta:endemic
ALBERTA: Kananaskis Range
HABITAT: Mountain slopes
STATUS: Rare in Canada.

Draba lactea = D. fladnizensis

Draba longipes Raup
REFERENCE: CAN, UAC; and maps
RANGE: Alas–NWT, BC–wAlta
ALBERTA: Banff National Park (Snow Creek Valley)
MAP: Cody 1971, Hultén 1968, Mulligan 1970a, Raup 1947, Univ. of Alta 1975
HABITAT: Below snowbeds in mountains

Draba stenopetala = D. densifolia

Draba ventosa Gray
REFERENCE: CAN, UAC; Kershaw 1976, Packer & Dumais 1972, Porsild 1959 and maps
RANGE: YT, wAlta; disj Wyo, Colo, Wash
ALBERTA: Banff and Jasper National Parks and Brazeau National Forest
MAP: Mulligan 1971, Univ. of Alta 1975
HABITAT: Mountains
STATUS: Rare in Colorado and Washington.

Draba verna L.
REFERENCE: Kuijt 1973 and map
RANGE: sBC–sAlta, sOnt–sQue; s to Cal–Mont, eUS
ALBERTA: Waterton Lakes National Park
MAP: Booth & Wright 1959 Montana, Univ. of Alta 1975
HABITAT: Lowlands

Drosera linearis Goldie
REFERENCE: ALTA, CAN; IBP–CT 1974, Packer & Dumais 1972
RANGE: BC–wAlta–Que, Nfld; Great Lakes, Me
ALBERTA: Banff National Park(Lake Louise) and Rocky Mountain House
MAP: Wynne 1944
HABITAT: Bogs
STATUS: Rare in Saskatchewan and Ontario. Endangered in Minnesota, Wisconsin and Maine.

Dryopteris cristata (L.) Gray
REFERENCE: ALTA, CAN, DAO; Moss 1959 and map
RANGE: BC–cAlta–NS–Nfld; s to Ida–nwMont, s to Ark–NC
ALBERTA: Elk Island Provincial Park and Fort Saskatchewan
MAP: Hultén 1958, Taylor 1970 Pacific NW, †
HABITAT: Marshes, bogs and swampy thickets
STATUS: Extirpated in Texas, threatened in North Carolina, rare in Iowa, Illinois and Tennessee.
PROTECTION: Protected by law in New York.

Dryopteris filix–mas (L.) Schott
REFERENCE: ALTA, CAN, UAC; Packer 1975–77 and map
RANGE: BC–swAlta, Man, Ont, Que, NS–Nfld; s to OrenwMont, Cal–NM; s to Mich–Vt
ALBERTA: Waterton Lakes National Park
MAP: Hultén 1964a, Taylor 1970 Pacific NW, †
HABITAT: Woods and shaded talus slopes
STATUS: Rare in Ontario. Extirpated in California, endangered in Texas, threatened in Colorado and Michigan and rare in Oregon and Oklahoma.
PROTECTION: Protected by law in New York.

Dryopteris fragrans (L.) Schott
REFERENCE: ALTA, CAN, DAO; Moss 1959 and maps
RANGE: Alas–NWT, BC–neAlta–Lab; s to Great Lakes, New England
ALBERTA: Fort Chipewyan, Fort Smith and Slave River
MAP: Hultén 1964a, Hultén 1968, Porsild 1964 Can, Raup 1947 Can, Taylor 1970 Pacific NW
HABITAT: Cliffs of basic rocks and talus slopes
STATUS: Rare in Nova Scotia. Endangered in Wisconsin and Vermont.
PROTECTION: Protected by law in New York and Vermont.

Dryopteris phegopteris = Phegopteris polypodioides

Eleocharis elliptica Kunth
REFERENCE: CAN; Moss & Pegg 1963, Packer & Dumais 1972 and map
RANGE: swBC–sAlta, Man–NS–Nfld; Mont, s to Minn–Ill–Pa–RI
ALBERTA: Mayerthorpe
MAP: Svenson 1939
HABITAT: Damp to dry sand, gravel shores and turf
STATUS: Threatened in Rhode Island.

Elodea longivaginata St. John
REFERENCE: CAN, DAO; Kershaw 1976, Packer & Dumais 1972 and maps
RANGE: sAlta–swSask; s to NM–ND
ALBERTA: Gem to Vauxhall
MAP: St. John 1962, St. John 1965, Sculthorpe 1967
HABITAT: Sloughs, ponds and lakes
STATUS: Rare in Saskatchewan

Elymus arenarius ssp. **mollis = E. mollis**

Elymus mollis Trin.
(*E. arenarius* L. ssp. *mollis* (Trin.) Hult.)
REFERENCE: CAN; Moss 1959 and maps
RANGE: Alas–NWT, BC, neAlta–Sask, Ont–Lab; s to coastal Cal, Great Lakes, New England
ALBERTA: Lake Athabasca
MAP: Bowden 1957, Hultén 1964a, Hultén 1968, Porsild 1964 Can
HABITAT: Sand dunes
STATUS: Rare in Ontario. Threatened in Michigan.

Elymus virginicus L.
REFERENCE: ALTA, DAO; Moss 1959
RANGE: BC–e&swAlta–Que, NS–Nfld; widespread US
ALBERTA: Pincher Creek and Ribstone Creek
MAP: Hitchcock & Chase 1950 US, †
HABITAT: Open woods and thickets
STATUS: Threatened in Rhode Island, rare in Arizona.

Epilobium glaberrimum Barbey
(*E. platyphyllum* Rydb.)
REFERENCE: DAO; Kershaw 1976 and map
RANGE: BC–swAlta; s to Cal–Utah–wMont
ALBERTA: Waterton Lakes National Park
MAP: Univ. of Alta 1975
HABITAT: Moist slopes and lake beaches in mountains

Epilobium luteum Pursh
REFERENCE: UAC; Moss 1959, Packer & Dumais 1972 and map
RANGE: Alas, BC–wAlta; s to Cal
ALBERTA: Banff National Park
MAP: Hultén 1968
HABITAT: Wet places in mountains
STATUS: Rare in California.

Epilobium platyphyllum = E. glaberrimum

Erigeron divergens T. & G.
REFERENCE: UAC; Packer 1975–77
RANGE: sBC, swAlta; s to Cal–Okl
ALBERTA: Waterton Lakes National Park
MAP: Booth & Wright 1966 Montana, †
HABITAT: Sandy, dry and waste places in valleys and foothills

Erigeron evermannii = E. scotteri

Erigeron flagellaris Gray
REFERENCE: ALTA, DAO, UAC; Kershaw 1976, Ogilvie 1962 and map
RANGE: sBC–swAlta; disj wWyo–SD, Tex, Ariz
ALBERTA: Waterton Lakes National Park
MAP: Univ. of Alta 1975, †
HABITAT: Open places

Erigeron ochroleucus Nutt.
REFERENCE: ALTA, CAN, DAO, UAC; Kershaw 1976, Ogilvie 1962
RANGE: swAlta; s to sWyo–nwNeb
ALBERTA: Waterton Lakes National Park to Highwood River
MAP: Booth & Wright 1959 Montana
HABITAT: Dry hills and mountains
STATUS: Rare in Canada.

Erigeron pallens Cronq.
REFERENCE: ALTA, CAN, DAO, UAC; Boivin 1967–72, Kershaw 1976, Moss 1959, Packer & Dumais 1972, Porsild 1959
RANGE: seBC–wAlta
ALBERTA: Banff and Jasper National Parks
HABITAT: Alpine

Erigeron radicatus Hook.
REFERENCE: CAN, UAC; Boivin 1967–72, Kershaw 1976, Moss 1959
RANGE: swAlta–swSask
ALBERTA: Ram Mountain and Nordegg
HABITAT: Dry ridges and hilltops
STATUS: Rare in Canada.

Erigeron scotteri Boivin
(*E. evermannii* auct.)
REFERENCE: ALTA, DAO; Boivin 1967, Boivin 1967–72, Kershaw 1976, Packer & Dumais 1972
RANGE: wAlta; clda
ALBERTA: Banff and Jasper National Parks
HABITAT: Alpine
STATUS: Rare in Canada. Rare in Idaho.

Eriogonum cernuum Nutt.
REFERENCE: ALTA, CAN, DAO; Boivin 1967–72 and map
RANGE: seAlta–swSask; s to Cal–NM–Neb
ALBERTA: Writing-on-Stone Provincial Park, Empress and Medicine Hat
MAP: Booth & Wright 1959 Montana, Univ. of Alta 1975, †
HABITAT: Badlands and valley slopes
STATUS: Rare in Canada.

Eriophorum callitrix Cham.
REFERENCE: ALTA, CAN, DAO; Packer & Dumais 1972 and maps
RANGE: Alas–NWT, BC–wAlta, Man, Lab; disj swMont
ALBERTA: Banff National Park (Snow Creek Pass), Willmore Wilderness Provincial Park and Mountain Park
MAP: Hultén 1968, Packer & Vitt 1974, Porsild 1964 Can
HABITAT: Relatively dry sphagnum bogs

Erysimum pallasii (Pursh) Fern.
REFERENCE: ALTA, CAN, DAO; Kershaw 1976, Moss 1959, Packer & Dumais 1972, Porsild 1959 and maps
RANGE: Alas–NWT, wAlta
ALBERTA: Banff and Jasper National Parks
MAP: Hultén 1968, Hultén 1971, Porsild 1964
HABITAT: Mountains

Eupatorium purpureum L. var. **maculatum** (L.) Darl.
REFERENCE: ALTA; Packer 1975–77
RANGE: BC, Alta, Sask–NS, Nfld; s to Utah–NM–Ill–Mich
ALBERTA: Peace River
MAP: †
HABITAT: Perched wetland
STATUS: Endangered in Colorado, rare in Kansas.

Festuca occidentalis Hook. var. **occidentalis**
REFERENCE: ALTA, DAO; Packer 1975–77
RANGE: sBC–swAlta, cOnt; s to Cal–Wyo, Great Lakes
ALBERTA: Waterton Lakes National Park
MAP: Hitchcock & Chase 1950 US
HABITAT: Woods and thickets
STATUS: Rare in Ontario. Endangered in Wisconsin, rare in Wyoming.

Festuca subulata Trin.
REFERENCE: ALTA, CAN; Moss 1959, Packer 1975–77 and maps
RANGE: Alas, wBC–wAlta; s to nCal–Wyo
ALBERTA: Waterton Lakes National Park (locally common) and Castle River
MAP: Hitchcock & Chase 1950 US, Hultén 1968, Koyama & Kowano 1964
HABITAT: Moist woods
STATUS: Rare in Wyoming.

Festuca viridula Vasey
REFERENCE: ALTA; Moss 1959, Packer & Dumais 1972
RANGE: BC–wAlta; s to Cal–Mont
ALBERTA: Mountain east of Rock Lake
MAP: Hitchcock & Chase 1950 US
HABITAT: Mountain meadows and open slopes

Fragaria vesca L. var. **bracteata** (Heller) Davis
REFERENCE: ALTA, UAC; Ogilvie 1962
RANGE: BC–swAlta; s to Cal–NM
ALBERTA: Waterton Lakes National Park
HABITAT: Moist mountain slopes

Franseria acanthicarpa = Ambrosia acanthicarpa

Galium palustre L.
REFERENCE: ALTA, CAN; IBP-CT 1974, Kershaw & Morton 1976, Moss & Pegg 1963, Packer & Dumais 1972 and map
RANGE: YT, w&cAlta, nMan-Que; Great Lakes-neUS
ALBERTA: Jasper National Park and Swan Hills
MAP: Hultén 1958, Hultén 1968, Univ. of Alta 1975
HABITAT: Wet places

Gaultheria humifusa (Graham) Rydb.
REFERENCE: ALTA; Packer 1975-77 and map
RANGE: BC-swAlta; s to nCal-Colo
ALBERTA: Banff National Park (Lake Agnes) and Waterton Lakes National Park
MAP: Booth & Wright 1959 Montana, Univ. of Alta 1975
HABITAT: Wet woods and thickets

Gayophytum humile = G. racemosum

Gayophytum racemosum T. & G.
(*G. humile* auct.)
REFERENCE: ALTA, DAO; Boivin 1967-72, Kershaw 1976, Ogilvie 1962 and maps
RANGE: swAlta; s to Cal-Colo-Mont
ALBERTA: Waterton Lakes National Park
MAP: Lewis & Szweykowski 1964, Univ. of Alta 1975
HABITAT: Sandy soil
STATUS: Rare in Canada. Rare in Wyoming.

Gentiana aquatica L.
(*G. tremontii* Torr.)
REFERENCE: DAO; Boivin 1967-72, Kershaw 1976 and map
RANGE: wAlta-swSask; Cal, Colo
ALBERTA: Calgary
MAP: Gillett 1963
HABITAT: Shores
STATUS: Rare in Canada. Threatened in the United States. (Smithsonian Institution 1975). Rare in California.

Gentiana calycosa Griseb. var. **obtusiloba** (Rydb.) C. L. Hitchc.
REFERENCE: ALTA, CAN, DAO; Kershaw 1976, Ogilvie 1962 and map
RANGE: seBC-swAlta; s to Mont
ALBERTA: Locally common at Waterton Lakes National Park
MAP: Univ. of Alta 1975
HABITAT: High mountains

Gentiana detonsa ssp. **raupii = Gentianella detonsa** ssp. **raupii**

Gentiana fremontii = G. aquatica

Gentiana glauca Pall.
REFERENCE: ALTA, CAN, DAO, UAC; and maps
RANGE: Alas-YT, BC-wAlta; s to Mont
ALBERTA: Banff to Jasper National Parks (locally common) and Mountain Park
MAP: Gillett 1963, Hultén 1968, Raup 1947, Univ. of Alta 1975
HABITAT: Mountains

Gentiana raupii = Gentianella detonsa ssp. **raupii**

Gentianella detonsa (Rottb.) G. Don ssp. **raupii** (Pors.) Gillett
(*Gentiana detonsa* Rottb. var. *raupii* (Pors.) Boivin, *G. raupii* Pors.)
REFERENCE: ALTA; and maps
RANGE: Alas-NWT, neAlta, nOnt
ALBERTA: Wood Buffalo National Park
MAP: Cody 1971, Gillett 1957, Gillett 1963, Hultén 1968, Univ. of Alta 1975
HABITAT: Moist banks, shores and mountain meadows
STATUS: Rare in Ontario.

Geranium erianthum DC.
(*G. pratense* L. var. *erianthum* (DC.) Boivin)
REFERENCE: DAO; Kershaw 1976, Packer & Dumais 1972
RANGE: Alas-YT,nBC-swAlta
ALBERTA: Jasper National Park (Athabasca River)
MAP: Hultén 1968
HABITAT: Montane prairie

Geranium pratense var. **erianthum = G. erianthum**

Glyceria elata (Nash) M. E. Jones
REFERENCE: ALTA, CAN; Packer 1975-77
RANGE: sBC-swAlta; s to Cal-NM
ALBERTA: Waterton Lakes National Park and Crowsnest Forest Reserve
HABITAT: Moist woods, banks and meadows

Glyceria pauciflora = Puccinellia pauciflora

Gnaphalium microcephalum Nutt. var. **thermale** (E. Nels.) Cronq.
REFERENCE: ALTA, DAO; Ogilvie 1962 and map
RANGE: sBC-swAlta; s to Cal-Colo
ALBERTA: Waterton Lakes National Park
MAP: Univ. of Alta 1975
HABITAT: Open places in forests
STATUS: Rare in Wyoming.

Gnaphalium viscosum HBK.
REFERENCE: DAO; Boivin 1967-72
RANGE: BC-swAlta, Ont-NS; s to Ore-NM, s to Tenn
ALBERTA: Carbondale
MAP: Booth & Wright 1959 Montana
HABITAT: Forest openings

Habenaria saccata = Platanthera stricta

Halimolobos virgata (Nutt.) O. E. Schulz
REFERENCE: CAN; Boivin 1967-72
RANGE: seAlta-swSask; s to Utah-Colo, Cal
ALBERTA: Cypress Hills Provincial Park and Medicine Hat
HABITAT: Sandy alkaline soil
STATUS: Rare in Canada. Threatened in the United States (Smithsonian Institution 1975), rare in Colorado and California.

Hammarbya paludosa = Malaxis paludosa

Hemieva ranunculifolia = Suksdorfia ranunculifolia

Heuchera glabra Willd.
REFERENCE: CAN, DAO, UAC; Boivin 1967–72, IBP–CT 1974, Ogilvie 1962, Packer & Dumais 1972 and map
RANGE: sAlas, BC–wAlta; s to Ore
ALBERTA: Jasper National Park (Mount Edith Cavell)
MAP: Hultén 1968
HABITAT: River cliffs

Hierochloe alpina (Sw.) R. & S.
REFERENCE: ALTA, CAN, DAO; Moss 1959, Packer & Dumais 1972 and maps
RANGE: Alas–NWT, BC–wAlta, Man, Que, Nfld–Lab; s to Me, NY
ALBERTA: Jasper National Park
MAP: Hultén 1964a, Hultén 1968, Porsild 1964 Can, Raup 1947
HABITAT: Alpine meadows

Hippuris montana Ledeb.
REFERENCE: ALTA; Packer 1975–77
RANGE: Alas–YT, NWT, BC–swAlta; Wash
ALBERTA: Jasper National Park (Chaba River)
MAP: Hultén 1968, Raup 1947
HABITAT: Alpine streams and mossy banks in wet to boggy meadows

Hordeum brachyantherum Nevski
(*H. jubatum* L. var. *boreale* (Hitchc.) Boivin, *H. nodosum* auct.)
REFERENCE: ALTA; Dore 1975, Moss 1959, Tisdale & Budd 1948 and map
RANGE: Alas–YT, BC–nAlta–Sask, Nfld; s to Cal–NM (possibly introduced in east)
ALBERTA: Fort Vermillion
MAP: Hitchcock & Chase 1950 US, Hultén 1968
HABITAT: Saline soil
STATUS: Rare in Saskatchewan. Endangered in Indiana.

Hordeum jubatum var. **boreale = H. brachyantherum**

Hordeum nodosum = H. brachyantherum

Hordeum pusillum Nutt.
REFERENCE: Bowden 1962, Kershaw 1976
RANGE: swAlta, swOnt (introduced); widespread US
MAP: Hitchcock & Chase 1950 US
HABITAT: Saline soil
STATUS: Rare in Canada. Endangered in Minnesota and rare in Iowa.

Hydrophyllum capitatum Dougl.
REFERENCE: ALTA, CAN, DAO, UAC; Ogilvie 1962 and maps
RANGE: sBC–swAlta; s to Cal–Colo
ALBERTA: Locally common from Waterton Lakes National Park to Crowsnest and Pincher Creek
MAP: Constance 1942, Univ. of Alta 1975
HABITAT: Wet meadows and slopes

Hymenopappus filifolius Hook. var. **polycephalus** (Oster.) B. L. Turner
REFERENCE: ALTA, DAO; Boivin 1967–72, Kershaw 1976 and maps
RANGE: seAlta–swSask; s to Mont–nColo, wSD
ALBERTA: Writing-on-Stone Provincial Park, Cardston and Rumsey
MAP: Turner 1956, Univ. of Alta 1975, †
HABITAT: Dry hills and plains
STATUS: Rare in Saskatchewan

Hypericum formosum HBK. var. **nortoniae** (M. E. Jones) C. L. Hitchc.
REFERENCE: DAO; and maps
RANGE: BC–swAlta; s to neOre–Wyo–Mont
ALBERTA: Locally common at Waterton Lakes National Park
MAP: Gillett 1976, Univ. of Alta 1975
HABITAT: Mountains

Hypopitys monotropa = Monotropa hypopitys

Iliamna rivularis (Dougl.) Greene
REFERENCE: ALTA, CAN, UAC; Kershaw 1976, Ogilvie 1962 and map
RANGE: BC–swAlta; s to Ore–Colo
ALBERTA: Locally common at Waterton Lakes National Park
MAP: Univ. of Alta 1975
HABITAT: Mountain slopes, meadows and stream banks
STATUS: Uncommon in Washington.

Iris missouriensis Nutt.
REFERENCE: DAO, UAC; Kershaw 1976 and maps
RANGE: wBC–seAlta; s to Cal–NM, SD
ALBERTA: Carway and Whiskey Gap
MAP: De Vries 1966 Can, Ramaley 1939, Univ. of Alta 1975, †
HABITAT: Meadows and streambanks
STATUS: Uncommon in Washington.

Isoetes bolanderi Engelm.
REFERENCE: CAN, DAO, UAC; Boivin 1967–72, Kershaw 1976, Ogilvie 1962
RANGE: sBC–swAlta; s to Cal–Ariz–Colo
ALBERTA: Waterton Lakes National Park
MAP: Taylor 1970 Pacific NW
HABITAT: Mountain ponds and lakes
STATUS: Rare in Arizona.

Juncus stygius L. ssp. **americanus** (Buch.) Hult.
REFERENCE: ALTA, CAN, DAO; Packer & Dumais 1972 and map
RANGE: Alas, NWT, BC–w&cAlta–Sask, Ont–NB, NS–Lab; Minn–Mich, NY, Me
ALBERTA: Banff National Park (Lake Louise), Hinton and Swan Hills
MAP: Hultén 1958, Hultén 1968, Moss & Pegg 1963 cAlta
HABITAT: Bogs
STATUS: Rare in Saskatchewan and Nova Scotia. Endangered in Minnesota and Maine, threatened in Michigan.

Koenigia islandica L.
REFERENCE: ALTA, CAN; Moss 1959, Packer & Dumais 1972 and maps
RANGE: Alas-NWT, BC, wAlta, Man, nOnt, nQue, Lab; disj Mont, Colo
ALBERTA: Jasper National Park (Whistler Mountain and Mount Edith Cavell)
MAP: Cody 1971, Hultén 1968, Hultén 1971, Porsild 1964 Can
HABITAT: Wet places
STATUS: Rare in Ontario. Rare in Colorado.

Larix occidentalis Nutt.
REFERENCE: ALTA, CAN; Moss 1959 and maps
RANGE: BC-wAlta; s to Ore-nwMont
ALBERTA: Kananaskis
MAP: Hosie 1969 Can, Little 1971
HABITAT: Mountain valleys and lower slopes

Lesquerella alpina (Nutt.) Wats.
REFERENCE: ALTA, CAN, DAO
RANGE: sAlta-swSask; s to Colo-Kan-ND
ALBERTA: Writing-on-Stone Provincial Park, Whiskey Gap and Onefour
MAP: †
HABITAT: Dry plains and hills
STATUS: Rare in Saskatchewan. Rare in Colorado and Kansas.

Lewisia pygmaea (Gray) Robins.
REFERENCE: ALTA, DAO; Kershaw 1976, Moss 1959, Ogilvie 1962 and map
RANGE: YT, BC-swAlta; s to Cal-NM
ALBERTA: Waterton Lakes National Park
MAP: Booth & Wright 1959 Montana, Hultén 1968
HABITAT: High mountains
STATUS: Rare in Idaho.

Lilaea scilloides (Poir.) Haum.
REFERENCE: ALTA, DAO; Kershaw 1976, Moss 1944, Packer 1975-77 and map
RANGE: BC-seAlta-sSask; s to Cal-Mont
ALBERTA: Cypress Hills Provincial Park and Manyberries
MAP: Univ. of Alta 1975
HABITAT: Sloughs and mudflats
STATUS: Rare in Saskatchewan.

Listera caurina Piper
REFERENCE: Ogilvie 1962 and maps
RANGE: Alas, BC-wAlta; s to Cal-Wyo
ALBERTA: Banff to Waterton Lakes National Parks
MAP: Luer 1975, Univ. of Alta 1975
HABITAT: Moist forest and streambanks
STATUS: Rare in Wyoming.
PROTECTION: An export permit is required under the Convention on International Trade in Endangered Species of Wild Fauna and Flora (Canada 1973, 1975) ratified by Canada and the United States.

Listera convallarioides (Swartz) Nutt.
REFERENCE: Maps
RANGE: BC-swAlta-Nfld; s to Cal-Ariz, Mont-Wyo, Great Lakes-Me
ALBERTA: Castle River
MAP: Luer 1975, Univ. of Alta 1975
HABITAT: Moist shaded areas
STATUS: Endangered in Vermont and Minnesota, threatened in Wisconsin and rare in Arizona.
PROTECTION: An export permit is required under the Convention on International Trade in Endangered Species of Wild Fauna and Flora (Canada 1973, 1975) ratified by Canada and the United States. Protected by law in Minnesota, Michigan, New York and Vermont.

Lithophragma parviflora (Hook.) Nutt.
REFERENCE: ALTA, CAN, DAO, UAC; Scotter 1976 and maps
RANGE: BC-swAlta; s to nCal-Colo-SD
ALBERTA: Locally common from Banff to Waterton Lakes National Parks
MAP: Taylor 1965, Univ. of Alta 1975
HABITAT: Prairie, grassland and lower montane forest

Lobelia dortmanna L.
REFERENCE: ALTA; Packer 1975-77 and map
RANGE: swBC, neAlta, Sask, Man-Lab; s to nOre, Great Lakes, neUS
ALBERTA: Richardson River
MAP: Fernald 1933, Hultén 1958, McVaugh 1936
HABITAT: Shallow water at margins of lakes and ponds
STATUS: Threatened in Rhode Island.

Lobelia spicata Lam.
REFERENCE: DAO; Packer & Dumais 1972
RANGE: cAlta-NS; s to SD-Ark-Ga-Me
ALBERTA: Craigmyle District
MAP: Booth & Wright 1959 Montana, McVaugh 1936
HABITAT: Rich meadows, fields and thickets
STATUS: Endangered in South Dakota.

Loiseleuria procumbens (L.) Desv.
REFERENCE: ALTA, DAO; Cody et al. 1974, Packer & Dumais 1972
RANGE: Alas-NWT, wBC-wAlta, nwSask-nMan, Que, NS-Lab; Wash, New England
ALBERTA: Jasper National Park
MAP: Hultén 1958, Hultén 1968, Porsild 1964 Can
HABITAT: Acid soil in mountains
STATUS: Rare in Saskatchewan. Endangered in Maine, rare in Washington.

Lomatium cous (Wats.) C. & R.
REFERENCE: ALTA, UAC; Boivin 1967-72, Packer & Dumais 1972
RANGE: seAlta-swSask; s to eOre-nWyo
ALBERTA: Cypress Hills Provincial Park
MAP: Booth & Wright 1959 Montana
HABITAT: Dry, open, rocky, slopes and flats
STATUS: Rare in Canada.

Lomatium sandbergii C. & R.
REFERENCE: ALTA, CAN, DAO; Kershaw 1976, Ogilvie 1962, Packer 1975–77 and maps
RANGE: seBC–swAlta; s to nIda–nwMont
ALBERTA: Waterton Lakes National Park (locally common) and North Kootenay Mountain
MAP: Booth & Wright 1959 Montana, Cash 1954, Univ. of Alta 1975
HABITAT: High mountains

Luetkea pectinata (Pursh) Kuntze
REFERENCE: ALTA, CAN, DAO, UAC; and maps
RANGE: sAlas–swYT, BC–wAlta; s to nCal–wMont
ALBERTA: Banff National Park (North Saskatchewan River) and Jasper National Park
MAP: Booth & Wright 1959 Montana, Hultén 1968, Univ. of Alta 1975
HABITAT: High mountains

Lupinus arbustus Dougl. ssp. **pseudoparviflorus** (Rydb.) Dunn
REFERENCE: Maps
RANGE: sBC–swAlta; s to Nev–wMont
MAP: Dunn 1957 US, Dunn & Gillett 1966 Can
HABITAT: Moist shaded areas

Lupinus arcticus S. Wats. ssp. **subalpinus** (Piper & Rob.) Dunn
REFERENCE: Maps
RANGE: BC–swAlta; s to Ore
MAP: Dunn 1965, Dunn & Gillett 1966

Lupinus minimus Dougl.
REFERENCE: CAN; Dunn & Gillett 1966, Kershaw 1976
RANGE: sBC–swAlta; s to Ore
ALBERTA: Waterton Lakes National Park (locally common) and Coleman

Lupinus nootkatensis Donn
REFERENCE: ALTA, CAN, DAO; IBP–CT 1974, Ogilvie 1962, Packer & Dumais 1972 and map
RANGE: sAlas, BC–wAlta, wNS (introduced)
ALBERTA: Jasper National Park and Willmore Wilderness Provincial Park
MAP: Dunn 1965, Dunn & Gillett 1966, Hultén 1968

Lupinus polyphyllus Lindl.
REFERENCE: DAO; IBP–CT 1974, Packer & Dumais 1972 and map
RANGE: Alas, BC–wAlta, Ont–Nfld (introduced in the east); s to Cal
ALBERTA: Livingstone Ridge
MAP: Dunn 1965, Dunn & Gillett 1966, Hultén 1968, Phillips 1955
HABITAT: Riverbanks, creekbeds and meadows

Lupinus wyethii S. Wats.
REFERENCE: CAN; Packer & Dumais 1972 and map
RANGE: sBC–sAlta; s to Cal–Colo
ALBERTA: Medicine Hat
MAP: Booth & Wright 1959 Montana, Dunn & Gillett 1966 Can

Luzula acuminata Raf.
REFERENCE: ALTA, DAO; Packer & Dumais 1972
RANGE: cAlta–Nfld; s to Minn–Ala–Ga–Me
ALBERTA: Swan Hills and Chip Lake
MAP: Ebinger 1962, Hultén 1964a
HABITAT: Woods, clearings and bluffs
STATUS: Endangered in Georgia, rare in Iowa and Illinois.

Luzula arcuata (Wahl.) Sw.
REFERENCE: ALTA, CAN, DAO, UAC; Packer & Dumais 1972 and maps
RANGE: Alas–NWT, BC–wAlta; s to Wash
ALBERTA: Jasper National Park (Mount Edith Cavell), Banff National Park and Cadomin
MAP: Hultén 1968, Raup 1947
HABITAT: Rocky or gravelly soil
STATUS: Rare in Washington.

Lycopodium inundatum L.
REFERENCE: CAN
RANGE: Alas, BC, neAlta, Sask, Ont–Lab; s to Cal–Mont, Minn–eastward
ALBERTA: Maybelle River
HABITAT: Moist depressions in sand dunes
STATUS: Endangered in California and Indiana, threatened in Rhode Island and rare in Oregon, Idaho and Illinois.
PROTECTION: Protected by law in Michigan and New York.

Lycopodium sabinaefolium var. **sitchense = L. sitchense**

Lycopodium sitchense Rupr.
(*L. sabinaefolium* Willd. ssp. *sitchense* (Rupr.) Calder & Taylor)
REFERENCE: CAN, DAO; Packer 1975–77 and maps
RANGE: Alas, BC–c&swAlta–Sask; s to Ore–Mont, Great Lakes–New England
ALBERTA: Waterton Lakes National Park and Swan Hills
MAP: Hultén 1968, Porsild 1966 Can, Taylor 1970 Pacific NW, Univ. of Alta 1975
HABITAT: Thickets, open woods and barrens
STATUS: Rare in Saskatchewan. Threatened in Michigan and rare in Idaho and Oregon.
PROTECTION: Protected by law in Michigan and New York.

Lygodesmia rostrata Gray
REFERENCE: Wallis 1977
RANGE: sAlta–swMan; s to Colo–Neb
HABITAT: Sandy areas
STATUS: Rare in Saskatchewan. Extirpated in Texas.

Machaeranthera tanacetifolia (HBK.) Nees
(*Aster tanacetifolius* HBK.)
REFERENCE: CAN; Boivin 1967–72, Kershaw 1976
RANGE: swAlta; s to Ariz–Tex–Neb
ALBERTA: Belly River
MAP: Booth & Wright 1959 Montana, †
HABITAT: Arroyos
STATUS: Rare in Canada.

Malaxis monophyllos (L.) Sw. var. **brachypoda** (Gray) Morris & Eames
REFERENCE: ALTA; and map
RANGE: Alas-YT, BC-cAlta-NB, NS-Nfld; disj Cal, Colo, s to Great Lakes-Me-NJ
ALBERTA: Edmonton, Rife and Lac Ste. Anne
MAP: Hultén 1964, Hultén 1968, Luer 1975
HABITAT: Damp woods, banks and bogs
STATUS: Rare in Nova Scotia and Saskatchewan. Extirpated in Illinois, endangered in Colorado, Vermont and Maine, threatened in Wisconsin, rare in Connecticut, California and New Jersey.
PROTECTION: An export permit is required under the Convention on International Trade in Endangered Species of Wild Fauna and Flora (Canada 1973, 1975) ratified by Canada and the United States. Protected by law in Minnesota, Wisconsin, Michigan, New York and Vermont.

Malaxis paludosa (L.) Sw.
(*Hammarbya paludosa* (L.) Ktze.)
REFERENCE: ALTA, DAO; Kershaw 1976, Moss 1959 and map
RANGE: sAlas, NWT, sBC, cAlta, sSask, Ont; s to nMinn
ALBERTA: Glenevis
MAP: Hultén 1958, Hultén 1968, Luer 1975
HABITAT: Wet sphagnum bogs
STATUS: Rare in Saskatchewan and Ontario. Endangered in Minnesota.
PROTECTION: An export permit is required under the Convention on International Trade in Endangered Species of Wild Fauna and Flora (Canada 1973, 1975) ratified by Canada and the United States. Protected by law in Minnesota.

Melandrium affine (J. Vahl) Hartm.
(*Silene involucrata* (C. & S.) Bocq.)
REFERENCE: CAN; Moss 1959, Packer & Dumais 1972, Weir 1974 and map
RANGE: Alas-NWT, BC-wAlta, Man-Que, Lab
ALBERTA: Banff National Park
MAP: Hultén 1968, Hultén 1971, Porsild 1964, Univ. of Alta 1975

Melica smithii (Porter) Vasey
REFERENCE: CAN, UAC; Moss 1959 and maps
RANGE: BC-swAlta, sOnt; s to Ore-Wyo, Great Lakes
ALBERTA: Waterton Lakes National Park and Castlemount
MAP: Boyle 1945, Fernald 1935
HABITAT: Moist woodlands
STATUS: Rare in Ontario. Endangered in Wisconsin, rare in Wyoming.

Melica spectabilis Scribn.
REFERENCE: CAN, UAC; Kershaw 1976 and map
RANGE: sBC-wAlta; s to nCal-Colo
ALBERTA: Banff National Park(Sunshine area) and Castlemount
MAP: Boyle 1945
HABITAT: Open woods and meadows

Mertensia longiflora Greene
REFERENCE: ALTA, CAN, DAO, UAC; Ogilvie 1962 and map
RANGE: sBC-swAlta; s to Nev-nWyo-wMont
ALBERTA: Locally common at Waterton Lakes National Park
MAP: Booth & Wright 1959 Montana, Univ. of Alta 1975
HABITAT: Mountain slopes and banks

Microseris cuspidata (Pursh) Schultz-Bip.
REFERENCE: CAN; Packer & Dumais 1972
RANGE: sAlta-swMan; s to Okl-Ill-Wis, w to Colo
ALBERTA: Milk River and Red Deer
MAP: Booth & Wright 1959 Montana, †
HABITAT: Steppes on hillsides
STATUS: Rare in Illinois.

Microseris nutans (Geyer) Schultz-Bip.
REFERENCE: ALTA, CAN, DAO; Ogilvie 1962
RANGE: BC-swAlta; s to Cal-Colo
ALBERTA: Waterton Lakes National Park (locally common), Coleman and Oldman River
MAP: Booth & Wright 1959 Montana
HABITAT: Dry to moist slopes, grassy areas and open woods

Microsteris gracilis (Hook.) Greene
(*Phlox gracilis* (Hook.) Greene)
REFERENCE: ALTA, UAC; Boivin 1967-72, Moss 1959, Ogilvie 1962, Packer 1975-77
RANGE: sAlas-sYT, sBC-swAlta; s to Cal-NM
ALBERTA: North Kootenay Mountain to Crowsnest
MAP: Booth & Wright 1959 Montana, Hultén 1968
HABITAT: Slopes and thickets

Mimulus floribundus Dougl.
REFERENCE: ALTA; Moss 1959, Ogilvie 1962
RANGE: sBC-swAlta; s to Cal, Mont, Ark
ALBERTA: Hillcrest
MAP: Booth & Wright 1959 Montana
HABITAT: Moist ground
STATUS: Rare in Arkansas.

Mimulus guttatus DC.
REFERENCE: ALTA, CAN, DAO, UAC; Ogilvie 1962 and map
RANGE: Alas-YT, BC-sAlta-Sask; s to Cal-NM-ND (introduced in eUS)
ALBERTA: Waterton Lakes National Park (locally common), Crowsnest and Cypress Hills Provincial Park
MAP: Booth & Wright 1959 Montana, Hultén 1968, †
HABITAT: Wet ground, meadows and streams
STATUS: Rare in Saskatchewan. Endangered in North Dakota.

Mimulus lewisii Pursh

REFERENCE: ALTA, CAN, DAO, UAC; Ogilvie 1962 and maps

RANGE: sAlas, BC–swAlta; s to Cal–Colo–Wyo

ALBERTA: Waterton Lakes National Park (locally common), North Kootenay Mountain and Crowsnest Forest Reserve

MAP: Booth & Wright 1959 Montana, Hultén 1968, Univ. of Alta 1975

HABITAT: Along mountain streams and lakes

STATUS: Rare in Colorado.

Monotropa hypopitys L.

(*Hypopitys monotropa* Crantz.)

REFERENCE: ALTA, CAN, DAO; Ogilvie 1962, Packer 1975–77, Wallis 1977 and maps

RANGE: Alas, BC–swAlta–Sask, Ont–Nfld; widespread US

ALBERTA: Waterton Lakes National Park to Crowsnest Forest Reserve and Cypress Hills Provincial Park

MAP: Booth & Wright 1959 Montana, Hultén 1968, Hultén 1971, Univ. of Alta 1975

HABITAT: Coniferous woods

STATUS: Rare in Saskatchewan. Endangered in Texas and Georgia, rare in Oregon, Colorado, Iowa, Illinois, and Kansas.

PROTECTION: Protected by law in New Mexico.

Montia linearis (Dougl.) Greene

(*Claytonia linearis* Dougl.)

REFERENCE: ALTA, CAN, DAO, UAC; Moss 1959, Ogilvie 1962, Packer 1975–77

RANGE: BC–swAlta–swSask; s to Cal–nMont

ALBERTA: Waterton Lakes National Park to Pincher Creek

MAP: Booth & Wright 1959 Montana

HABITAT: Moist ground on plains and hills

STATUS: Rare in Saskatchewan.

Montia parvifolia (Moc.) Greene

(*Claytonia parvifolia* Moc.)

REFERENCE: ALTA, CAN; Ogilvie 1962, Packer 1975–77 and maps

RANGE: seAlas, BC–swAlta; s to Cal–Utah–Mont

ALBERTA: Locally common at Waterton Lakes National Park

MAP: Booth & Wright 1959 Montana, Hultén 1968, Univ. of Alta 1975

HABITAT: Moist places in mountains

Muhlenbergia asperifolia (Nees & Meyen) Parodi

REFERENCE: DAO; Wallis 1977

RANGE: seBC–sAlta–sMan; s to Cal–Tex–Mississippi Valley

ALBERTA: Gem

MAP: Hitchcock & Chase 1950 US, †

HABITAT: Low sandy and saline soil

Munroa squarrosa (Nutt.) Torr.

REFERENCE: CAN, DAO; Moss 1959, Tisdale & Budd 1948

RANGE: eAlta–Sask; s to Cal–Tex

ALBERTA: Medicine Hat and Hardisty

MAP: Hitchcock & Chase 1950 US, Porter 1950 Wyoming, †

HABITAT: Dry plains, slopes and disturbed soils

Myosurus aristatus Benth.

(*M. minimus* L. var. *aristatus* (Benth.) Boivin)

REFERENCE: ALTA, CAN, DAO, UAC; Kershaw 1976 and map

RANGE: scBC–seAlta–sSask; s to Cal–Utah

ALBERTA: Medicine Hat, Manyberries and Warner

MAP: Booth & Wright 1959 Montana, Univ. of Alta 1975

HABITAT: Mud flats and depressions on prairie

Myosurus minimus var. **aristatus** = **M. aristatus**

Nemophila breviflora Gray

REFERENCE: ALTA, CAN, DAO; Kershaw 1976, Ogilvie 1962 and map

RANGE: sBC–swAlta; s to Cal–nUtah–Ida

ALBERTA: Locally common at Waterton Lakes National Park

MAP: Constance 1941, Univ. of Alta 1975

HABITAT: Moist places in mountains

Oenothera andina = **Camissonia andina**

Oenothera breviflora = **Camissonia breviflora**

Oenothera caespitosa Nutt. var. **psammophila** (Nels. & MacBr.) Munz

(*O. psammophila* Nels. & MacBr.)

REFERENCE: DAO; Boivin 1967–72

RANGE: swAlta; s to Ida

ALBERTA: Cardston

HABITAT: Bare clays and badlands

STATUS: Rare in Canada. Endangered in the United States (United States 1976) and Idaho.

Oenothera flava (Nels.) Garratt

REFERENCE: ALTA, CAN, DAO; Kershaw 1976 and map

RANGE: eAlta–sSask; s to NM–Cal–eWash

ALBERTA: Cypress Hills Provincial Park, Empress, Hand Hills, Pincher Creek and Calgary

MAP: Booth & Wright 1959 Montana, Univ. of Alta 1975, †

HABITAT: Clay flats

STATUS: Rare in Washington.

Oenothera psammophila = **O. caespitosa** var. **psammophila**

Orobanche ludoviciana Nutt.
REFERENCE: ALTA, CAN, DAO, UAC; Boivin 1967–72
RANGE: BC–se&cAlta–swMan; s to Cal–Tex–Ind
ALBERTA: Medicine Hat, Manyberries and Fort Saskatchewan
MAP: Booth & Wright 1959 Montana, †
HABITAT: Prairie; parasitic on *Artemisia* and other Compositae
STATUS: Endangered in Missouri, rare in Iowa and Illinois.

Orobanche uniflora L.
REFERENCE: ALTA, DAO; Boivin 1967–72 and map
RANGE: BC–swAlta–swSask, Ont–Nfld; widespread US
ALBERTA: Locally common from Waterton Lakes National Park to Castle River and Morley
MAP: Booth & Wright 1959 Montana, Univ. of Alta 1975
HABITAT: Damp woods or grassy areas
STATUS: Rare in Saskatchewan. Endangered in South Carolina, threatened in Wisconsin, rare in Iowa and Alabama.

Oryzopsis canadensis (Poir.) Torr.
REFERENCE: ALTA, CAN, DAO; Packer 1975–77
RANGE: BC–cAlta–Lab; Wyo, Great Lakes, New England–Appalachian Mts
ALBERTA: Fort Saskatchewan (locally common), Pigeon Lake and Olds
MAP: Hitchcock & Chase 1950 US
HABITAT: Thickets and woods
STATUS: Rare in Nova Scotia. Endangered in Wisconsin, threatened in Michigan.

Oryzopsis exigua Thurb.
REFERENCE: ALTA, DAO, UAC; Kershaw 1976, Packer 1975–77
RANGE: seBC–swAlta; s to Nev–Colo
ALBERTA: Waterton Lakes National Park to Castle River
MAP: Hitchcock & Chase 1950 US
HABITAT: Dry open ground or thin woods in mountains

Oryzopsis micrantha (Trin. & Rupr.) Thurb.
REFERENCE: CAN; Wallis 1977
RANGE: BC–wAlta–swMan; s to eMont–Cal–NM–Okla
ALBERTA: Carcajou and Kananaskis
MAP: Hitchcock & Chase 1950 US, †
HABITAT: Open woods and rocky ridges or slopes
STATUS: Extirpared in Texas, rare in California and Oklahoma.

Osmorhiza aristata var. **longistylis** = **O. longistylis**

Osmorhiza chilensis var. **purpurea** = **O. purpurea**

Osmorhiza longistylis (Torr.) DC.
(*O. aristata* (Thunb.) Mak. & Yabe var. *longistylis* (Torr.) Boivin)
REFERENCE: ALTA, CAN, DAO; and maps
RANGE: se&cAlta–NB,NS; eWyo–Tex–eUS
ALBERTA: Cypress Hills Provincial Park, Medicine Hat and Edmonton (locally common)
MAP: Constance & Shan 1948, Univ. of Alta 1975, †
HABITAT: Damp woods

Osmorhiza occidentalis (Nutt.) Torr.
REFERENCE: CAN, UAC; Kershaw 1976, Ogilvie 1962 and map
RANGE: seBC–swAlta; s to Cal–Colo–wMont
ALBERTA: Waterton Lakes National Park (locally common) to Crowsnest and Pincher Creek
MAP: Constance & Shan 1948
HABITAT: Woods in mountains

Osmorhiza purpurea (C. & R.) Suksd.
(*O. chilensis* H. & A. var. *purpurea* (C. & R.) Boivin)
REFERENCE: CAN; and map
RANGE: sAlas, BC–swAlta; s to Cal–nwMont
ALBERTA: Waterton Lakes National Park to North Kootenay Mountain
MAP: Constance & Shan 1948, Hultén 1968, Univ. of Alta 1975
HABITAT: Woods and mountain slopes

Oxytropis lagopus Nutt. var. **conjugans** Barneby
REFERENCE: DAO; Kershaw 1976, Packer & Dumais 1972, Shaw 1966
RANGE: swAlta; s to nwMont
ALBERTA: Cardston
MAP: Barneby 1952
HABITAT: Rolling steppe on gravelly soil
STATUS: Rare in Canada.

Pachistima myrsinites (Pursh) Raf.
REFERENCE: ALTA, DAO, UAC; Ogilvie 1962 and map
RANGE: BC–swAlta; s to Cal–wColo
ALBERTA: Locally common from Waterton Lakes National Park to Crowsnest Pass
MAP: Booth & Wright 1959 Montana, Univ. of Alta 1975
HABITAT: Coniferous woods and mountain slopes

Panicum leibergii Scribn.
REFERENCE: DAO; Packer 1975–77
RANGE: cAlta–swOnt; s to ND–Tex–NY
ALBERTA: Holborn Ferry (23 mi. w of Edmonton)
MAP: Hitchcock & Chase 1950 US, †
STATUS: Threatened in Michigan and Pennsylvania and rare in Indiana and Kansas.

Panicum occidentale Scribn.
(*P. thermale* auct.)
REFERENCE: CAN; Kershaw 1976, Moss 1959, Packer 1975–77
RANGE: sBC–swAlta, s to Cal–Ariz, wMont–Wyo
ALBERTA: Banff National Park
MAP: Hitchcock & Chase 1950 US
HABITAT: Wet soil near hot springs in mountains
STATUS: Endangered in California.

Panicum thermale = **P. occidentale**

Panicum wilcoxianum Vasey
REFERENCE: CAN, DAO; Moss 1959
RANGE: cAlta–swMan; s to NM–Ill
ALBERTA: Fort Saskatchewan
MAP: Hitchcock & Chase 1950 US, †
HABITAT: Dry open places
STATUS: Rare in Saskatchewan. Rare in Colorado.

Papaver freedmanianum D. Löve
REFERENCE: ALTA; Kershaw 1976, Löve & Freedman 1956, Packer & Dumais 1972
RANGE: Alas-NWT,wAlta
ALBERTA: Jasper National Park (Opal Hills)

Papaver kluanensis D. Löve
REFERENCE: CAN, UAC; Kershaw & Morton 1976, Löve & Freedman 1956, Packer 1975-77 and maps
RANGE: YT, wAlta; Wyo-NM
ALBERTA: Banff to Jasper National Parks
MAP: Löve 1969, Univ. of Alta 1975
HABITAT: Exposed alpine sites

Papaver nudicaule var. **coloradense** = **P. pygmaeum**

Papaver pygmaeum Rydb.
(*P. nudicaule* L. var. *coloradense* Fedde)
REFERENCE: ALTA, CAN, DAO; Kershaw 1976, Ogilvie 1962, Packer 1975-77 and maps
RANGE: BC-swAlta; s to nwMont
ALBERTA: Waterton Lakes National Park (locally common) and Jasper National Park (Athabasca Glacier)
MAP: Löve 1969, Univ. of Alta 1975
HABITAT: High alpine areas
STATUS: Rare in Montana.

Pedicularis arctica R. Br.
(*P. langsdorfii* Fisch. ssp. *arctica* (R. Br.) Pennell)
REFERENCE: ALTA, CAN; and maps
RANGE: Alas-NWT, BC-wAlta
ALBERTA: Jasper National Park (locally common) and Banff National Park
MAP: Hultén 1968, Hultén 1971, Porsild 1964, Univ. of Alta 1975
HABITAT: Alpine

Pedicularis flammea L.
REFERENCE: ALTA, CAN, UAC; Kershaw 1976, Moss 1959, Packer & Dumais 1972, Weir 1974 and maps
RANGE: NWT, wAlta, Man-Que, Nfld-Lab
ALBERTA: Jasper National Park and Willmore Wilderness Provincial Park (locally common)
MAP: Hultén 1958, Hultén 1968, Packer & Vitt 1974, Porsild 1964, Univ. of Alta 1975
HABITAT: Alpine
STATUS: Rare in Ontario.

Pedicularis kanei Dur.
(*P. lanata* auct.)
REFERENCE: ALTA, DAO; and maps
RANGE: Alas-NWT, BC-wAlta, nQue
ALBERTA: Willmore Wilderness Provincial Park, Mountain Park and Cadomin
MAP: Hultén 1968, Porsild 1964, Raup 1947, Univ. of Alta 1975
HABITAT: Alpine

Pedicularis lanata = **P. kanei**

Pedicularis langsdorfii ssp. **arctica** = **P. arctica**

Pedicularis macrodonta Richards.
(*P. parviflora* auct.)
REFERENCE: CAN; Boivin 1967-72 and map
RANGE: Alas-NWT, BC, cAlta, Sask, Man, Ont, Que
ALBERTA: Ma-Me-O Beach (locally common) and Swan Hills
MAP: Hultén 1968
HABITAT: Wet bogs and meadows

Pedicularis parviflora = **P. macrodonta**

Pedicularis racemosa Dougl. var. **alba** (Pennell) Cronq.
REFERENCE: ALTA, DAO; Boivin 1967-72, Moss 1959, Packer 1975-77
RANGE: BC-wAlta; s to Cal-NM
ALBERTA: Jasper National Park
HABITAT: Mountain slopes

Pellaea atropurpurea (L.) Link.
REFERENCE: CAN; Kershaw 1976, Packer 1975-77, Wallis 1977 and maps
RANGE: BC-wAlta-Sask, Ont-Que; s to Fla, w to Ariz-SD
ALBERTA: Banff National Park (Canmore)
MAP: Rigby & Britton 1970 Can, Tryon 1957, Tryon 1972, Univ. of Alta 1975, †
HABITAT: On calcareous rocks
STATUS: Rare in Saskatchewan and Ontario. Endangered in Minnesota, Wisconsin, South Carolina and West Virgina, threatened in Michigan and Rhode Island, rare in Colorado, Iowa and Louisiana.
PROTECTION: Protected by law in New York.

Penstemon albertinus Greene
REFERENCE: ALTA, CAN, UAC; Boivin 1967-72, Kershaw 1976, Ogilvie 1962 and map
RANGE: seBC-swAlta; s to Ida-nwMont
ALBERTA: Locally common from Waterton Lakes National Park to Crowsnest Forest Reserve
MAP: Keck 1945
HABITAT: Mountains

Penstemon fruticosus (Pursh) Greene ssp. **scouleri** (Lindl.) Penn. & Keck
REFERENCE: ALTA, CAN, DAO; Moss 1959
RANGE: sBC-swAlta; s to Wash-Ida
ALBERTA: Waterton Lakes National Park, Crowsnest and Hillcrest
HABITAT: Rocky, open or wooded places

Penstemon lyallii Gray
REFERENCE: ALTA, CAN, DAO, UAC; Kershaw 1976, Ogilvie 1962 and map
RANGE: seBC-swAlta; s to eWash-nwMont
ALBERTA: Locally common from Waterton Lakes National Park to Crowsnest
MAP: Booth & Wright 1959 Montana, Univ. of Alta 1975
HABITAT: Mountains

Phacelia linearis (Pursh) Holz.
REFERENCE: ALTA, CAN, DAO, UAC; Ogilvie 1962 and map
RANGE: sBC–swAlta; s to nCal–Utah–Wyo
ALBERTA: Waterton Lakes National Park (locally common), Crowsnest Forest Reserve, Pincher Creek and Milk River
MAP: Gillett 1962, Univ. of Alta 1975
HABITAT: Slopes and plains

Phacelia lyallii (Gray) Rydb.
REFERENCE: ALTA, CAN, UAC; Kershaw 1976, Ogilvie 1962 and maps
RANGE: seBC–swAlta; s to Ida–wMont
ALBERTA: Locally common at Waterton Lakes National Park
MAP: Gillett 1960, Univ. of Alta 1975
HABITAT: Alpine slopes
STATUS: Rare in Montana and Idaho.

Phegopteris polypodioides Fée
(*Thelypteris phegopteris* (L.) Slosson, *Dryopteris phegopteris* (L.) Christ.)
REFERENCE: CAN, DAO; Boivin 1967–72, IBP–CT 1974, Ogilvie 1962, Packer & Dumais 1972
RANGE: Alas–YT, BC–cAlta–Lab; s to Ore–Mont, Great Lakes–eUS
ALBERTA: Swan Hills and Whitecourt
MAP: Hultén 1968, Taylor 1970 Pacific NW
HABITAT: Open damp woods, wet mossy rocks and crevices
STATUS: Rare in Saskatchewan. Endangered in North Carolina, threatened in Rhode Island, rare in Oregon, Illinois and Tennessee.
PROTECTION: Protected by law in New York.

Philadelphus lewisii Pursh
REFERENCE: ALTA, CAN, DAO, UAC; Kuijt 1973, Kuijt & Trofymow 1975, Moss 1959, Ogilvie 1962
RANGE: BC–swAlta; s to nCal–wMont
ALBERTA: Locally common at Waterton Lakes National Park
MAP: Hu 1954–56
HABITAT: Mountain slopes

Phlox alyssifolia Greene
REFERENCE: ALTA, CAN, DAO, UAC; Boivin 1967–72, Kershaw 1976, Ogilvie 1962 and maps
RANGE: swAlta–swSask; s to swMont–ncColo–wDakotas
ALBERTA: Whiskey Gap, Cardston and Pincher Creek
MAP: Univ. of Alta 1975, Wherry 1955, †
HABITAT: Rocky and gravelly slopes
STATUS: Rare in Canada.

Phlox gracilis = Microsteris gracilis

Physocarpus malvaceus (Greene) Kuntze
REFERENCE: ALTA, CAN, DAO; Boivin 1967–72, Ogilvie 1962
RANGE: BC–swAlta; s to Ore–Utah–Wyo
ALBERTA: Waterton Lakes National Park
MAP: Booth & Wright 1959 Montana
HABITAT: Thickets and open places in forest

Pinus monticola Dougl.
REFERENCE: ALTA, DAO; IBP–CT 1974, Moss 1959 and maps
RANGE: BC–swAlta; s to Cal–nwMont
ALBERTA: Waterton Lakes National Park
MAP: Hosie 1969 Can, Little 1971
HABITAT: Moist valleys to open dry slopes

Plantago canescens Adams
(*P. septata* Morris)
REFERENCE: ALTA, CAN, DAO; Kershaw 1976 and maps
RANGE: Alas–NWT, eBC–swAlta; s to nwMont
ALBERTA: Jasper National Park, Whiskey Gap, Fort MacLeod and Coleman
MAP: Bassett 1967, Bassett 1973, Hultén 1968, Porsild 1964 Can, Univ. of Alta 1975
HABITAT: Foothills, prairie, gulches and shores

Plantago maritima L.
REFERENCE: DAO; Boivin 1967–72, Packer & Dumais 1972
RANGE: Alas–NWT, BC–nAlta, nMan–Lab; US maritime coasts, Utah
ALBERTA: Wood Buffalo National Park
MAP: Hultén 1968, Hultén 1971, Bassett 1973
HABITAT: Saline soil
STATUS: Rare in Ontario.

Plantago patagonica Jacq. var. **spinulosa** (Dcne.) Gray
(*P. spinulosa* Dcne.)
REFERENCE: CAN; Bassett 1973, Wallis 1977
RANGE: BC–seAlta; s to Cal, Mo
ALBERTA: Milk River and Sage Creek
MAP: †
HABITAT: Prairie grassland
STATUS: Rare in Missouri.

Plantago septata = P. canescens

Plantago spinulosa = P. patagonica var. **spinulosa**

Platanthera saccata = P. stricta

Platanthera stricta Lindl.
(*Habenaria saccata* Greene, *Platanthera saccata* (Greene) Hult.)
REFERENCE: ALTA, CAN, DAO; and maps
RANGE: Alas–sYT, BC–swAlta; s to Cal–Wyo
ALBERTA: Locally common at Waterton Lakes National Park
MAP: Hultén 1968, Luer 1975, Univ. of Alta 1975
HABITAT: Wet meadows, bogs and forests
PROTECTION: An export permit is required under the Convention on International Trade in Endangered Species of Wild Fauna and Flora (Canada 1973, 1975) ratified by Canada and the United States.

Poa lanata Scribn. & Merr.
REFERENCE: CAN, UAC; Packer & Dumais 1972, Porsild 1959 and map
RANGE: Alas–NWT, BC–wAlta–nSask
ALBERTA: Banff National Park and Mountain Park
MAP: Hultén 1968
HABITAT: Meadows
STATUS: Rare in Saskatchewan.

Poa stenantha Trin.
REFERENCE: DAO; Packer 1975–77
RANGE: Alas–YT, BC–swAlta; s to Ore–Colo
ALBERTA: Waterton Lakes National Park to east of Brocket
MAP: Hitchcock & Chase 1950 US, Hultén 1968
HABITAT: Open flats in montane forest to subalpine meadows and talus slopes

Polemonium viscosum Nutt.
REFERENCE: ALTA, CAN, DAO, UAC; Kershaw 1976, Moss 1959, Ogilvie 1962 and maps
RANGE: BC–wAlta; s to Nev–NM
ALBERTA: Waterton Lakes National Park (locally common), North Kootenay Mountain and Mountain Park
MAP: Davidson 1950, Packer & Vitt 1974
HABITAT: Loose rock slopes in high alpine areas

Polygala paucifolia Willd.
REFERENCE: ALTA, DAO, UAC; Packer & Dumais 1972
RANGE: neAlta, ecSask–NB; Minn–eUS
ALBERTA: Fort McMurray (possibly extirpated)
HABITAT: Woods in light soil
STATUS: Rare in Saskatchewan. Extirpated in Illinois, endangered in Indiana, Georgia and North Carolina and rare in Iowa and New Jersey.

Polygonum austinae Greene
REFERENCE: ALTA, CAN; Kershaw 1976
RANGE: sBC–swAlta; s to Cal–Wyo
ALBERTA: Waterton Lakes National Park
HABITAT: Dry ground

Polygonum engelmannii Greene
REFERENCE: ALTA, CAN, DAO; Kershaw 1976 and map
RANGE: swAlta; s to Ida–Colo
ALBERTA: Waterton Lakes National Park and Pincher Creek
MAP: Booth & Wright 1959 Montana, Univ. of Alta 1975
HABITAT: Moist banks and slopes in mountains
STATUS: Rare in Canada.

Polygonum minimum Wats.
REFERENCE: ALTA, CAN, DAO; and map
RANGE: BC–wAlta; s to nCal–Colo
ALBERTA: Banff and Waterton Lakes National Parks and South Kootenay Pass
MAP: Booth & Wright 1959 Montana, Univ. of Alta 1975
HABITAT: Dry ground

Polypodium hesperium = P. vulgare var. **columbianum**

Polypodium vulgare L. var. **columbianum** Gilbert
(*P. hesperium* Maxon)
REFERENCE: ALTA, DAO; Boivin 1967–72 and maps
RANGE: Alas–YT, BC–swAlta; s to Ore–Mont, scattered to Ariz, Black Hills of SD
ALBERTA: Waterton Lakes National Park
MAP: Hultén 1964a, Hultén 1968, Lang 1969, Univ. of Alta 1975
HABITAT: Crevices and rocky slopes
STATUS: Threatened in Colorado, uncommon in Idaho.

Populus angustifolia James
REFERENCE: CAN, DAO, UAC; Kershaw 1976 and maps
RANGE: swAlta–swSask; s to Cal–Tex–wSD
ALBERTA: Fort MacLeod
MAP: Brayshaw 1965 sAlta, Hosie 1969 Can, Little 1976
HABITAT: Stream valleys
STATUS: Rare in Canada. Endangered in Texas, rare in Oregon.

Potamogeton obtusifolius Mert. & Koch
REFERENCE: CAN, DAO; Moss & Pegg 1963, Packer & Dumais 1972 and map
RANGE: YT–NWT, BC–c&neAlta–Que, NS; s to nwWash, nwMont, nwWyo, Kan, Great Lakes–NJ
ALBERTA: Glenevis and Maybelle River
MAP: Fernald 1932, Haynes 1974, Hultén 1958
HABITAT: Cold springs, streams and lakes
STATUS: Rare in Saskatchewan and Nova Scotia. Threatened in Pennsylvania, rare in Wyoming and Kansas.

Potamogeton pusillus L. var. **tenuissimus** Mert. & Koch
REFERENCE: DAO; and map
RANGE: Alas–NWT, BC–cAlta–Nfld; widespread US
ALBERTA: Fort Saskatchewan
MAP: Fernald 1932, Haynes 1974
HABITAT: Basic or alkaline waters
STATUS: Rare in Saskatchewan.

Potamogeton robbinsii Oakes
REFERENCE: DAO; Packer & Dumais 1972
RANGE: Alas, swBC–cAlta–NB, NS; s to Cal, Ida–Wyo, Great Lakes–ne US
ALBERTA: Glenevis
MAP: Hultén 1968
HABITAT: Muddy waters
STATUS: Endangered in Indiana, rare in Illinois.

Potamogeton strictifolius Ar. Benn.
REFERENCE: DAO; and maps
RANGE: NWT, cAlta–Que; s to Utah–Wyo–Neb, Great Lakes–New England
ALBERTA: Lacombe
MAP: Fernald 1932, Haynes 1974, Univ. of Alta 1975, †
HABITAT: Calcareous waters
STATUS: Rare in Connecticut and Illinois.

Potentilla egedii ssp. **yukonensis = P. yukonensis**

Potentilla finitima Kohli & Packer
REFERENCE: CAN; and map
RANGE: sAlta–sMan; s to ND
ALBERTA: Calgary and Hardisty (extirpated)
MAP: Kohli & Packer 1976
HABITAT: Dry prairie

Potentilla yukonensis Hult.
(*P. egedii* Wormsk. ssp. *yukonensis* Hult.)
REFERENCE: DAO; Packer & Dumais 1972, and maps
RANGE: Alas–NWT, nAlta–Man; Colo
ALBERTA: Fort Vermillion
MAP: Hultén 1968, Hultén 1971
HABITAT: Along brooks and rivers

Prenanthes alata (Hook.) D. Dietr.
REFERENCE: ALTA, CAN, DAO; Moss & Pegg 1963, Packer & Dumais 1972
RANGE: sAlas, wBC–cAlta; s to Ore
ALBERTA: Swan Hills
MAP: Hultén 1968
HABITAT: Moist shaded places

Prenanthes sagittata (Gray) A. Nels.
REFERENCE: ALTA, CAN, DAO; Ogilvie 1962
RANGE: swAlta; s to nIda–wMont
ALBERTA: Locally common at Waterton Lakes National Park
MAP: Booth & Wright 1959 Montana
HABITAT: Moist shaded places in mountains
STATUS: Rare in Canada.

Primula egaliksensis Wormsk.
REFERENCE: ALTA, CAN; Moss 1959 and maps
RANGE: Alas–NWT, BC, wAlta, nMan–Que, Nfld–Lab; Colo
ALBERTA: Jasper National Park and Clearwater Forest Reserve
MAP: Hultén 1968, Hultén 1971
HABITAT: Moist ground
STATUS: Endangered in Colorado.

Primula stricta Hornem.
REFERENCE: CAN; Kershaw 1976, Moss 1959 and map
RANGE: Alas–NWT, BC, wAlta, Man–Que, Lab
ALBERTA: Jasper National Park
MAP: Hultén 1958, Hultén 1968, Porsild 1964
HABITAT: Moist ground

Pteridium aquilinum (L.) Kuhn var. **pubescens** Underw.
REFERENCE: CAN, DAO, UAC; Boivin 1967–72, Ogilvie 1962 and maps
RANGE: Alas, BC–wAlta, sMan–Nfld; s to Cal–Tex–wMont, Black Hills of SD
ALBERTA: Banff and Waterton Lakes National Parks and Crowsnest Forest Reserve
MAP: Hultén 1964a, Hultén 1968, Tryon 1941, Univ. of Alta 1975
HABITAT: Woods and thickets in mountains
STATUS: Endangered in Texas.

Pterospora andromedea Nutt.
REFERENCE: ALTA, CAN, DAO, UAC; Boivin 1967–72, Ogilvie 1962 and maps
RANGE: BC–sAlta–swSask, Ont–Que, PEI; s to Cal–Tex, SD, Wis–NH
ALBERTA: Waterton Lakes National Park (locally common), Crowsnest Forest Reserve, Cypress Hills Provincial Park and Pincher Creek
MAP: Bakshi 1959, Univ. of Alta 1975, †
HABITAT: Coniferous woods
STATUS: Rare in Saskatchewan and Ontario. Endangered in Wisconsin, Texas and New Hampshire, threatened in Michigan and rare in Nevada.
PROTECTION: Protected by law in New Mexico.

Puccinellia hauptiana (Krecz.) Kitagawa
REFERENCE: DAO; Packer 1975–77
RANGE: Alas–YT, nAlta, Ont
ALBERTA: Fort Fitzgerald
MAP: Hultén 1968
HABITAT: Wet places

Puccinellia pauciflora (Presl.) Munz
(*Glyceria pauciflora* Presl.)
REFERENCE: Packer 1975–77 and map
RANGE: Alas, BC–wAlta; s to Cal–NM, SD
MAP: Hitchcock & Chase 1950 US, Hultén 1968
HABITAT: Wet places

Pyrola bracteata Hook.
REFERENCE: ALTA, UAC; and maps
RANGE: Alas, BC–swAlta; s to nCal–wMont
ALBERTA: Waterton Lakes National Park (locally common) to Crowsnest
MAP: Haber 1976, Univ. of Alta 1975
HABITAT: Wet woods

Pyrola picta Sm.
REFERENCE: ALTA, UAC; Boivin 1967–72 and maps
RANGE: BC–swAlta; s to Cal–NM–nwMont
ALBERTA: Waterton Lakes National Park
MAP: Haber 1976, Univ. of Alta 1975
HABITAT: Coniferous woods
STATUS: Rare in Wyoming.

Ranunculus nivalis L.
REFERENCE: ALTA; Packer & Dumais 1972 and map
RANGE: Alas–NWT, BC–wAlta, Que, Lab
ALBERTA: Jasper National Park
MAP: Hultén 1968, Hultén 1971, Porsild 1964, Raup 1947, Univ. of Alta 1975
HABITAT: Alpine

Ranunculus occidentalis Nutt. var. **brevistylis** Greene
REFERENCE: ALTA; Packer 1975–77
RANGE: Alas–YT, BC–wAlta; s to Ore
ALBERTA: Willmore Wilderness Provincial Park
MAP: Hultén 1968
HABITAT: Mountains

Ranunculus verecundus Robins.
REFERENCE: CAN, DAO; Kershaw 1976, Moss 1959
RANGE: BC–wAlta; s to Ore–Mont
ALBERTA: Banff National Park
MAP: Booth & Wright 1959 Montana
HABITAT: Wet slopes near timberline

Rhododendron lapponicum Wahl.
REFERENCE: ALTA, CAN, UAC; Kershaw 1976, Packer 1975–77 and maps
RANGE: Alas–NWT, BC–wAlta, nMan–Que, Nfld–Lab; Wis, New England
ALBERTA: Clearwater Forest Reserve, White Goat Wilderness and Ram Mountain
MAP: Gillett 1971, Hultén 1958, Hultén 1968, Porsild 1964 Can, Univ. of Alta 1975
HABITAT: Alpine tundra
STATUS: Endangered in Wisconsin and Maine.

Rhynchospora alba (L.) Vahl
REFERENCE: Moss 1959, Packer 1975–77 and maps
RANGE: Alas, BC–Sask, Ont–Lab; s to Cal–Ida, Great Lakes–eUS
MAP: Gale 1944, Hultén 1958, Hultén 1968
HABITAT: Boggy or wet sandy places
STATUS: Rare in Saskatchewan. Endangered in North Carolina, rare in California, Illinois and Tennessee.

Rhynchospora capillacea Torr.
REFERENCE: ALTA, DAO, UAC; Moss & Pegg 1963, Packer & Dumais 1972
RANGE: cAlta–Man, Ont–NB, NS–Nfld; s to SD–Mo–Tenn–Va
ALBERTA: Heatherdown
MAP: Gale 1944
HABITAT: Damp calcareous ledges, bogs and sands
STATUS: Rare in Saskatchewan and Nova Scotia. Possibly extirpated in Tennessee, endangered in South Dakota, threatened in Pennsylvania and rare in Iowa and Illinois.

Ribes inerme Rydb.
(*R. oxyacanthoides* L. var. *saxosum* (Hook.) Cov.)
REFERENCE: ALTA, CAN, UAC; De Vries & Bird 1968, Ogilvie 1962 and map
RANGE: BC–swAlta–NS, Lab; s to Cal–NM
ALBERTA: Waterton Lakes National Park and Calgary
MAP: Booth & Wright 1959 Montana, Univ. of Alta 1975
HABITAT: Mountain forests
PROTECTION: Protected by law in New Mexico.

Ribes laxiflorum Pursh
REFERENCE: ALTA, CAN; Moss 1959
RANGE: sAlas, wBC–wAlta; s to Cal–nIda
ALBERTA: Banff National Park and Willmore Wilderness Provincial Park
MAP: Hultén 1968
HABITAT: Wet woods
STATUS: Rare in California.

Ribes oxyacanthoides var. **saxosum = R. inerme**

Ribes viscosissimum Pursh
REFERENCE: ALTA, CAN, DAO, UAC; Ogilvie 1962 and map
RANGE: BC–swAlta; s to Cal–Ariz–Colo
ALBERTA: Waterton Lakes National Park (locally common), Crowsnest Pass and Todd Creek
MAP: Booth & Wright 1959 Montana, Univ. of Alta 1975
HABITAT: Mountain forests
STATUS: Rare in Colorado.

Ruppia occidentalis Wats.
(*R. spiralis* L.)
REFERENCE: CAN; and maps
RANGE: Alas, BC–cAlta, Sask–Man; s to Cal, Mont–ND
ALBERTA: Hunt Lake
MAP: Hultén 1968, Univ. of Alta 1975
HABITAT: Saline water

Ruppia spiralis = R. occidentalis

Sagina nodosa (L.) Fenzl.
REFERENCE: CAN; Moss 1959 and maps
RANGE: NWT, neAlta, Sask–Lab; Lake Superior, New England
ALBERTA: Lake Athabasca
MAP: Hultén 1958, Hultén 1968, Porsild 1964 Can
HABITAT: Damp rock crevices and sandy shores
STATUS: Endangered in Minnesota, threatened in Michigan.

Salix calcicola = S. lanata ssp. **calcicola**

Salix lanata L. ssp. **calcicola** (Fern. & Wieg.) Hult.
(*S. calcicola* Fern. & Wieg.)
REFERENCE: CAN, DAO; Kershaw 1976, Moss 1959 and maps
RANGE: NWT, wAlta, neMan–Que, Nfld–Lab
ALBERTA: Banff National Park (North Saskatchewan River)
MAP: Hultén 1968, Hultén 1971, Porsild 1964
HABITAT: Gravelly river shores in mountains
STATUS: Rare in Ontario.

Salix sitchensis Sanson
REFERENCE: CAN; Argus 1976 and maps
RANGE: Alas, BC–cAlta; s to Cal–nwMont
ALBERTA: Whitecourt area
MAP: Hultén 1968, Little 1976
HABITAT: River banks

Salix stolonifera Cov.
REFERENCE: CAN; Kershaw 1976
RANGE: Alas–YT, nBC–wAlta
ALBERTA: Jasper National Park (Opal Hills)
MAP: Hultén 1968
HABITAT: Alpine

Salix tyrrellii Raup
REFERENCE: CAN
RANGE: neAlta–nwSask
ALBERTA: Maybelle River
MAP: Raup 1959
HABITAT: Active sand dunes
STATUS: Rare in Canada.

Sarracenia purpurea L.
REFERENCE: ALTA, DAO, UAC; Boivin 1967–72, Moss 1959 and maps
RANGE: NWT, BC–neAlta–Lab; Great Lakes–eUS
ALBERTA: Fort McMurray to Fort Chipewyan
MAP: Cody & Talbot 1973 wCan, Krajina 1968, McDaniel 1971
HABITAT: Peat bogs
STATUS: Endangered in Georgia and South Carolina, threatened in Louisiana and rare in Illinois.
PROTECTION: Protected by law in Wisconsin and New York.

Saussurea americana D. C. Eat.
REFERENCE: ALTA; Packer 1975–77 and map
RANGE: Alas–YT, BC–swAlta; s to nCal–Ida
ALBERTA: Waterton Lakes National Park
MAP: Hultén 1968, Univ. of Alta 1975
HABITAT: Moist meadows and open slopes
STATUS: Endangered in California.

Saxifraga arguta D. Don
(*S. odontoloma* Piper)
REFERENCE: ALTA, CAN
RANGE: sBC–swAlta; s to Cal–NM
ALBERTA: Waterton Lakes National Park to Coleman
MAP: Booth & Wright 1959 Montana
HABITAT: Moist places
STATUS: Rare in Arizona.
PROTECTION: Protected by law in New Mexico.

Saxifraga debilis Engelm.
REFERENCE: CAN, DAO; Kershaw 1976
RANGE: sBC–swAlta; s to Cal–Ariz–Colo
ALBERTA: Banff, Jasper and Waterton Lakes National Parks
MAP: Booth & Wright 1959 Montana
HABITAT: Damp cliffs, rock crevices and talus

Saxifraga flagellaris Willd.
REFERENCE: ALTA, CAN, DAO; Packer & Dumais 1972, Porsild 1959 and maps
RANGE: Alas–NWT, nBC–wAlta; disj sMont–Ariz–NM
ALBERTA: Banff National Park, Willmore Wilderness Provincial Park and Cadomin
MAP: Hultén 1958, Hultén 1964b, Hultén 1968, Packer & Vitt 1974, Porsild 1964 Can, Univ. of Alta 1975
HABITAT: Alpine scree and moist rocks
PROTECTION: Protected by law in New Mexico.

Saxifraga mertensiana Bong.
REFERENCE: ALTA, CAN, DAO, UAC; and map
RANGE: sAlas, BC–swAlta; s to Cal–nwMont
ALBERTA: Waterton Lakes National Park (locally common) to Crowsnest Pass
MAP: Booth & Wright 1959 Montana, Hultén 1968, Univ. of Alta 1975
HABITAT: Moist places in mountains

Saxifraga odontoloma = **S. arguta**

Saxifraga oregana Howell var. **subapetala** (E. Nels.) C. L. Hitchc.
(*S. subapetala* E. Nels.)
REFERENCE: CAN; Kershaw 1976
RANGE: swAlta; s to cMont–Wyo
ALBERTA: Coleman
HABITAT: Bogs, streambanks and wet meadows
STATUS: Rare in Canada.

Saxifraga subapetala = **S. oregana** var. **subapetala**

Schedonnardus paniculatus (Nutt.) Trel.
REFERENCE: ALTA, CAN, DAO; Moss 1959
RANGE: seAlta–swMan; s to Ariz–La–Ill–Minn
ALBERTA: Medicine Hat to Manyberries
MAP: Hitchcock & Chase 1950 US, †
HABITAT: Plains and waste places
STATUS: Extirpated in Illinois, endangered in Minnesota and rare in Iowa.

Scirpus atrovirens var. **pallidus** = **S. pallidus**

Scirpus clintonii Gray
REFERENCE: ALTA, CAN, DAO; Packer 1975–77
RANGE: cAlta–Sask, Ont–NB; Great Lakes–neUS
ALBERTA: Buck Lake, Sandy Lake and Cherhill
HABITAT: Banks, ledges and woods
STATUS: Rare in Saskatchewan and Ontario.

Scirpus fluviatilis (Torr.) Gray
REFERENCE: ALTA, CAN, DAO; Moss 1959
RANGE: cAlta–Man, Que; widespread US
ALBERTA: Nisku
HABITAT: Banks and marshes

Scirpus pallidus (Britt.) Fern.
(*S. atrovirens* Willd. var. *pallidus* Britt.)
REFERENCE: ALTA, CAN; Kershaw 1976, Moss 1959
RANGE: c&seAlta–seSask; s to Ore–Tex–Mo–Minn
ALBERTA: Fort Saskatchewan and Medicine Hat
MAP: †
HABITAT: Low ground
STATUS: Rare in Canada.

Selaginella wallacei Hier.
REFERENCE: ALTA, DAO; Boivin 1967–72 and map
RANGE: BC–swAlta; s to Cal–wMont
ALBERTA: Waterton Lakes National Park
MAP: Taylor 1970 Pacific NW, Tryon 1955
HABITAT: Rocky bluffs and slopes

Senecio conterminus Greenm.
REFERENCE: ALTA, CAN, DAO, UAC; and maps
RANGE: Alas–YT, wAlta; s to nwMont
ALBERTA: Locally common from Waterton Lakes National Park to Little Elbow Pass
MAP: Hultén 1968, Packer 1972, Porsild 1966 Can, Univ. of Alta 1975
HABITAT: Exposed alpine places
STATUS: Rare in Montana.

Senecio foetidus Howell var. **foetidus**
REFERENCE: CAN, DAO; Kershaw 1976, Packer & Dumais 1972
RANGE: sBC–swAlta; s to neOre–Ida
ALBERTA: Milk River
MAP: Barkley 1960
HABITAT: Along creeks

Senecio foetidus var. **hydrophiloides** = **S. hydrophiloides**

Senecio hydrophiloides Rydb.
(*S. foetidus* Howell var. *hydrophiloides* (Rydb.) Barkley)
REFERENCE: ALTA, CAN; Kershaw 1976 and map
RANGE: swAlta; s to Cal–Colo, SD
ALBERTA: Waterton Lakes National Park to North Kootenay Mountain
MAP: Barkley 1960
HABITAT: Moist places in open woods and low areas in foothills prairie
STATUS: Rare in Canada. Rare in Colorado.

Senecio megacephalus Nutt.
REFERENCE: CAN, DAO, UAC; Kershaw 1976, Ogilvie 1962 and map
RANGE: seBC–swAlta; s to nIda–Mont
ALBERTA: Waterton Lakes National Park (locally common) and Castle River
MAP: Booth & Wright 1959 Montana, Univ. of Alta 1975
HABITAT: Open places in mountains
STATUS: Rare in Wyoming.

Silene douglasii Hook.
REFERENCE: Kuijt 1973 and map
RANGE: BC–swAlta; s to Cal–Utah–wMont
ALBERTA: Waterton Lakes National Park
MAP: Booth & Wright 1959 Montana, Hultén 1968
HABITAT: Montane slopes

Silene involucrata = Melandrium affine

Sparganium glomeratum Laest.
REFERENCE: ALTA, CAN, DAO; Kershaw 1976, Packer & Dumais 1972 and map
RANGE: cAlta, Que; Minn
ALBERTA: Glenevis
MAP: Hultén 1964a, Moss & Pegg 1963 cAlta
HABITAT: Shallow pools
STATUS: Rare in Canada. Endangered in Minnesota.

Spergularia marina (L.) Griseb.
REFERENCE: CAN, DAO; Wallis 1977 and map
RANGE: NWT, BC–ne&seAlta–NS; s to Cal–Tex–ND, Gulf and northeastern coasts
ALBERTA: Wood Buffalo National Park and Suffield
MAP: Rossbach 1940
HABITAT: Saline soil

Spiraea densiflora Nutt. var. **splendens** (Baumann) C. L. Hitchc.
REFERENCE: ALTA, CAN, DAO; Ogilvie 1962, Packer 1975–77 and map
RANGE: swAlta; s to Cal–wMont
ALBERTA: Locally common at Waterton Lakes National Park
MAP: Univ. of Alta 1975
HABITAT: Moist thickets and meadows in mountains
STATUS: Rare in Canada.

Stellaria americana (Porter) Standl.
REFERENCE: DAO; Kershaw 1976, Ogilvie 1962 and map
RANGE: swAlta; s to scMont
ALBERTA: Waterton Lakes National Park
MAP: Booth & Wright 1959 Montana, Univ. of Alta 1975
HABITAT: Rocky alpine slopes
STATUS: Rare in Canada.

Stellaria arenicola Raup
REFERENCE: CAN
RANGE: neAlta–nwSask
ALBERTA: Maybelle River
MAP: Porsild 1963
HABITAT: Active sand dunes
STATUS: Rare in Canada.

Stellaria nitens Nutt.
REFERENCE: Kuijt 1973
RANGE: BC–swAlta; s to Cal–Utah, wMont
ALBERTA: Waterton Lakes National Park
MAP: Booth & Wright 1959 Montana
HABITAT: Streambanks and grassy hillsides

Stellaria obtusa Eng.
REFERENCE: CAN, DAO, UAC; Boivin 1967–72, Kershaw 1976, Packer 1975–77
RANGE: sAlas, seBC–swAlta; s to Cal–Colo
ALBERTA: Waterton Lakes National Park and Blairmore
MAP: Booth & Wright 1959 Montana
HABITAT: Damp meadows and along streams
STATUS: Rare in Colorado.

Stellaria umbellata Turcz.
REFERENCE: CAN; Kershaw 1976, Ogilvie 1962, Packer 1975–77 and maps
RANGE: Alas, wAlta; disj Ore–Cal, s in Mont–Colo
ALBERTA: Banff National Park
MAP: Booth & Wright 1959 Montana, Hultén 1968, Univ. of Alta 1975
HABITAT: Moist places in mountains
STATUS: Rare in Canada.

Stephanomeria runcinata Nutt.
(*S. tenuifolia* auct.)
REFERENCE: ALTA, CAN, DAO, UAC; Boivin 1967–72, Kershaw 1976, Moss 1959
RANGE: sAlta–swSask; s to nColo–nwNeb–ND
ALBERTA: Dinosaur Provincial Park, Oldman River, Pincher Creek and St. Mary's River
MAP: Booth & Wright 1959 Montana
HABITAT: Dry hills and plains
STATUS: Rare in Canada. Endangered in North Dakota, rare in Colorado.

Stephanomeria tenuifolia = S. runcinata

Streptopus streptopoides (Ledeb.) Frye & Rigg
REFERENCE: CAN, DAO; Moss & Pegg 1963, Packer & Dumais 1972
RANGE: Alas, BC–cAlta; s to Wash–nIda
ALBERTA: Swan Hills
MAP: Hultén 1968
HABITAT: Coniferous woods

Suckleya suckleyana (Torr.) Rydb.
REFERENCE: DAO; Boivin 1967–72, Wallis 1977
RANGE: sAlta–Sask; s to Colo
ALBERTA: Manyberries and Craddoch
MAP: Booth & Wright 1959 Montana, †
HABITAT: Slough margins and roadsides

Suksdorfia ranunculifolia (Hook.) Engl.
(*Hemieva ranunculifolia* (Hook.) Raf.)
REFERENCE: ALTA, CAN; Moss 1959, Ogilvie 1962, Packer 1975–77
RANGE: BC–swAlta; s to Cal–nMont
ALBERTA: Waterton Lakes National Park
HABITAT: Wet rocks in mountains
STATUS: Rare in Oregon.

Suksdorfia violacea Gray
REFERENCE: ALTA, CAN; Boivin 1967–72, Ogilvie 1962, Packer 1975–77 and map
RANGE: BC–swAlta; s to Ore–nwMont
ALBERTA: Waterton Lakes National Park to North Kootenay Mountain
MAP: Booth & Wright 1959 Montana, Univ. of Alta 1975
HABITAT: Wet rocks near streams and falls
STATUS: Rare in Oregon, uncommon in Washington.

Tanacetum huronense Nutt. var. **bifarium** Fern.
(*Chrysanthemum bipinnatum* L. ssp. *huronense* (Nutt.) Breitung
REFERENCE: CAN, DAO; Moss 1959 Raup 1936 and map
RANGE: Alas–NWT, BC, neAlta, Man–Que
ALBERTA: Lake Athabasca and Maybelle River
MAP: Hultén 1968, Hultén 1971
HABITAT: Active sand dunes
STATUS: Rare in Ontario. Endangered in Wisconsin and Maine, threatened in Michigan.

Taxus brevifolia Nutt.
REFERENCE: ALTA, CAN, UAC; IBP–CT 1974, Kuijt 1973, Moss 1959 and maps
RANGE: Alas, BC–swAlta; s to nCal, Ida–nwMont
ALBERTA: Waterton Lakes National Park
MAP: Hosie 1969 Can, Hultén 1968, Little 1971
HABITAT: Moist forests

Telesonix jamesii (Torr.) Raf. var. **heucheriformis** (Rydb.) Bacigalupi
REFERENCE: ALTA, CAN, DAO; Kershaw 1976 and maps
RANGE: wAlta; disj Mont, Wyo–Colo, Nev, SD
ALBERTA: Jasper National Park, Nordegg and Cadomin
MAP: Packer & Vitt 1974, Univ. of Alta 1975
HABITAT: Moist rock crevices and talus slopes
STATUS: Rare in Canada. Rare in Colorado.

Thelesperma marginatum Rydb.
(*T. subnudum* auct.)
REFERENCE: CAN, DAO; Boivin 1967, Boivin 1967–72, Kershaw 1976, Packer & Dumais 1972
RANGE: seAlta; s to wMont–swWyo
ALBERTA: Medicine Hat
HABITAT: Dry open places
STATUS: Rare in Canada.

Thelesperma subnudum = T. marginatum

Thelypteris phegopteris = Phegopteris polypodioides

Thellungiella salsuginea (Pall.) O. E. Schulz
REFERENCE: CAN, DAO; Kershaw 1976
RANGE: NWT–YT, BC–neAlta–Man
ALBERTA: Wood Buffalo National Park, Fort Vermillion and St. Albert
HABITAT: Sandy alkaline soils

Thuja plicata D. Don
REFERENCE: ALTA, CAN, DAO, UAC; Boivin 1967–72, IBP–CT 1974, Moss 1959, Ogilvie 1962 and maps
RANGE: seAlas, BC–w&cAlta; s to nCal–nwMont
ALBERTA: Banff and Jasper National Parks, Crowsnest Forest Reserve, Coleman and Fort Saskatchewan
MAP: Hosie 1969 Can, Hultén 1968, Little 1971
HABITAT: Forests on moist to swampy soils

Tiarella trifoliata L.
REFERENCE: ALTA, CAN, DAO, UAC; Boivin 1967–72, IBP–CT 1974, Moss 1959 and maps
RANGE: sAlas, BC, cAlta; s to Ore–nMont
ALBERTA: Locally common from Whitecourt to Swan Hills
MAP: Hultén 1968, Lakela 1937, Moss & Pegg 1963 cAlta, Univ. of Alta 1975
HABITAT: Moist woods

Tofieldia coccinea Rich.
REFERENCE: CAN; Kershaw 1976, Packer & Dumais 1972 and maps
RANGE: Alas–NWT, BC–nAlta
ALBERTA: Athabasca River
MAP: Hultén 1968, Porsild 1964
HABITAT: Stony, dry places

Townsendia condensata D. C. Eat.
REFERENCE: ALTA, CAN; IBP–CT 1974, Kershaw 1976, Kuijt 1973, Packer & Dumais 1972
RANGE: swAlta; s to Ida–nwMont–nwWyo
ALBERTA: Waterton Lakes National Park
MAP: Beaman 1957
HABITAT: Dry ridges
STATUS: Rare in Canada. Endangered in Wyoming, threatened in Idaho and rare in Montana.

Trillium ovatum Pursh
REFERENCE: ALTA; Moss 1959, Scotter 1976 and map
RANGE: sBC–swAlta; s to Cal–Colo
ALBERTA: Waterton Lakes National Park
MAP: Gates 1917
HABITAT: Moist woods
STATUS: Endangered in Colorado and rare in Wyoming.

Trisetum canescens Buckl.
REFERENCE: Packer 1975–77
RANGE: sBC–swAlta; s to Cal–wMont
MAP: Hitchcock & Chase 1950 US
HABITAT: Moist places in mountains

Trisetum cernuum Trin.
REFERENCE: CAN; Packer 1975–77
RANGE: Alas, BC–swAlta; s to nCal–wMont
ALBERTA: Waterton Lakes National Park and Castlemount
MAP: Hitchcock & Chase 1950 US, Hultén 1968
HABITAT: Moist woods

Trisetum montanum Vasey
REFERENCE: Kershaw 1976, Packer 1975–77
RANGE: swAlta; Colo–NM–Ariz
ALBERTA: Waterton Lakes National Park
STATUS: Rare in Canada. Rare in Arizona.

Trisetum wolfii Vasey
REFERENCE: DAO
RANGE: swAlta–swSask; s to Cal–NM–Mont
ALBERTA: Carbondale River
MAP: Hitchcock & Chase 1950 US
HABITAT: Meadows and moist places
STATUS: Rare in Canada.

Utricularia cornuta Michx.
REFERENCE: Kershaw 1976, Packer & Dumais 1972 and map
RANGE: neAlta–nwSask, sMan–Lab; Great Lakes–eUS
ALBERTA: Lake Athabasca area
MAP: Kondo 1972, McLaughlin 1932, Univ. of Alta 1975
HABITAT: Bogs
STATUS: Rare in Saskatchewan. Endangered in Indiana, threatened in Rhode Island and rare in Illinois.

Viola selkirkii Pursh
REFERENCE: CAN, DAO; Wallis 1977 and map
RANGE: Alas–NWT, BC–c&wAlta–NB, NS–Lab; Colo–NM, Great Lakes–neUS
ALBERTA: Jasper National Park (Mount Edith Cavell) and Glenevis
MAP: Harms 1973 Sask, Hultén 1968, Hultén 1971, Russell 1956
HABITAT: Cool woods
STATUS: Rare in Saskatchewan. Rare in Colorado and Connecticut.

Woodsia glabella R. Br.
REFERENCE: ALTA, CAN; and maps
RANGE: Alas–NWT, BC–wAlta–NB, NS–Lab; s to nMinn–NY–New England
ALBERTA: Banff and Jasper National Parks and Kananaskis Forest Reserve
MAP: Hultén 1964a, Hultén 1968, Porsild 1964 Can, Univ. of Alta 1975
HABITAT: Moist calcareous rocks and shaded cliffs
STATUS: Rare in Saskatchewan, Ontario and Nova Scotia. Endangered in Minnesota, Vermont and Maine.
PROTECTION: Protected by law in New York and Vermont.

Woodsia ilvensis R. Br.
REFERENCE: ALTA, CAN, DAO; and maps
RANGE: Alas–NWT, BC–neAlta–NB, NS–Lab; s to wGreat Lakes–neUS, Appalachian Mts
ALBERTA: Lake Athabasca and Fort Fitzgerald
MAP: Hultén 1964a, Hultén 1968, Porsild 1964 Can, Raup 1947 Can, Univ. of Alta 1975
HABITAT: Rock crevices
STATUS: Endangered in North Carolina, threatened in Rhode Island and rare in Iowa and Illinois.
PROTECTION: Protected by law in New York and Vermont.

Yucca glauca Nutt.
REFERENCE: ALTA, DAO, UAC; IBP–CT 1974, Kershaw 1976, Moss 1959, Weir 1974
RANGE: seAlta; s to Mont–Ariz–Tex–Iowa
ALBERTA: Onefour to Manyberries
MAP: Cheney 1931, †
HABITAT: Dry slopes
STATUS: Rare in Canada. Rare in Iowa.

BIBLIOGRAPHY

ALTA. Herbarium, University of Alberta, Edmonton, Alberta.

Argus, G. W. 1976. Personal communication.

Argus, G. W. 1977. Canada pp. 17–29. In G. T. Prance and T. S. Elias. Extinction is Forever. New York Botanical Garden. New York.

Argus, G. W., and D. J. White. 1977. The rare vascular plants of Ontario. Syllogeus 14.

Bakshi, T. S. 1959. Ecology and morphology of *Pterospora andromedea*. Botanical Gazette 120:203–217.

Barkley, T. M. 1960. A revision of *Senecio integerrimus* Nuttall and allied species. Leaflets of Western Botany 9:97–116.

Barneby, R. C. 1952. Revision of the North American species of *Oxytropis* DC. Proceedings of the California Academy of Sciences 27:177–309.

Barneby, R. C. 1964. Atlas of North American *Astragalus*. Memoirs of the New York Botanical Garden 13. 2 parts.

Bassett, I. J. 1967. Taxonomy of *Plantago* L. in North America: sections Holopsyllium Pilger, Palaeopsyllium Pilger and Lamprosantha Decne. Canadian Journal of Botany 45:565–577.

Bassett, I. J. 1973. The Plantains of Canada. Research Branch, Canada Department of Agriculture. Monograph 7.

Beaman, J. H. 1957. The systematics and evolution of *Townsendia* (Compositae). Contributions from the Gray Herbarium 183:1–151.

Beetle, A. A. 1960. A study of sagebrush. The section Tridentatae of *Artemisia*. University of Wyoming Agricultural Experiment Station. Bulletin 368.

Boivin, B. 1967. Enumération des plantes du Canada. Provancheria 6. Université Laval, Québec.

Boivin, B. 1967–1972. Flora of the Prairie Provinces. 3 parts. Provancheria 2, 3 and 4. Université Laval, Québec.

Booth, W. E., and J. C. Wright. 1959. Flora of Montana. Part II. Montana State University. Bozeman.

Boyle, W. S. 1945. A cytotaxonomic study of the North American species of *Melica*. Madrono 8:1–26.

Bowden, W. M. 1957. Cytotaxonomy of section Psammelymus of the genus *Elymus*. Canadian Journal of Botany 35:951–993.

Bowden, W. M. 1962. Cytotaxonomy of the native and adventive species of *Hordeum, Eremopyrum, Secale, Sitanion* and *Triticum* in Canada. Canadian Journal of Botany 40:1675–1711.

Brayshaw, T. C. 1965. Native poplars of southern Alberta and their hybrids. Department of Forestry No. 1109. Queens Printer.

Breitung, A. J. 1957. Annotated catalogue of the vascular flora of Saskatchewan. American Midland Naturalist 58:1–72.

Breitung, A. J. 1959. Supplement to 'Flora of Saskatchewan'. American Midland Naturalist 61:510–512.

CAN. National Herbarium of Canada, The National Museum of Natural Sciences, Ottawa.

Canada. 1973. Convention on international trade in endangered species of wild fauna and flora. Canadian Wildlife Service Reprint. September.

Canada. 1975. Amendments to the Export and Import Act. Canada Gazette Part II, 109(14).

Cash, H. J. 1954. The genus *Lomatium* (Umbelliferae) in Montana. Proceedings of the Montana Acadamy of Sciences 14:11–21.

Cheney, R. H. 1931. Geographic and taxonomic distribution of american plant arrow poisons. American Journal of Botany 18:136–145.

Clausen, R. T. 1938. A monograph of the Ophioglossaceae. Memoirs of the Torrey Botanical Club 19(2):1–177.

Cody, W. J. 1971. A phytogeographic study of the floras of the continental Northwest Territories and Yukon. Naturaliste canadien 98:145–158.

Cody, W. J., B. Boivin, and G. W. Scotter. 1974. *Loiseleuria procumbens* (L.) Desv., alpine azalea in Alberta. Canadian Field-Naturalist 88:229–230.

Cody, W. J., and S. S. Talbot. 1973. The pitcher plant *Sarracenia purpurea* L. in the northwestern part of its range. Canadian Field-Naturalist 87:318–320.

Collins, J. L., H. R. DeSelm, A. M. Evans, R. Kral, and B. E. Wofford. 1976. Tennessee Rare Plants. Tennessee Committee for Rare Plants. Unpublished.

Constance, L. 1941. The genus *Nemophila* Nutt. University of California Publications in Botany 19:341–398.

Constance, L. 1942. The genus *Hydrophyllum* L. American Midland Naturalist 27:710–731.

Constance, L., and R. H. Shan. 1948. The genus *Osmorhiza* (Umbelliferae), a study in geographic affinities. University of California Publications in Botany 23:111–156.

DAO. Department of Agriculture, Vascular Plant Herbarium, Biosystematics Research Institute, Ottawa.

Daubenmire, R. F. 1942. An ecological study of the vegetation of southeastern Washington and adjacent Idaho. Ecological Monographs 12:53–79.

Davidson, J. F. 1950. The genus *Polemonium* (Tournefort) L. University of California Publications in Botany 23:209–282.

De Vries, B. 1966. *Iris missouriensis* Nutt. in southwestern Alberta and in central and northern British Columbia. Canadian Field-Naturalist 80:158–160.

De Vries, B., and C. D. Bird. 1968. Additions to the vascular flora of the Cypress Hills, Alberta. Blue Jay 26:98–100.

Dore, W. G. 1975. Letter dated 22 May.

Dorn, R. D. 1977. Flora of Montana. Unpublished.

Dunn, D. B. 1957. A revision of the *Lupinus arbustus* complex of the Laxiflori. Madrono 14:54–73.

Dunn, D. B. 1965. The inter-relationships of the Alaskan lupines. Madrono 8:1–32.

Dunn, D. B., and J. M. Gillett. 1966. The Lupines of Canada and Alaska. Research Branch, Canada Department of Agriculture. Monograph 2.

Ebinger, J. E. 1962. The varieties of *Luzula acuminata*. Rhodora 64:74–83.

Ellison, W. L. 1964. A systematic study of the genus *Bahia* (Compositae). Rhodora 66:67–86, 177–215, 281–311.

Fernald, M. L. 1932. The linear-leaved North American species of *Potamogeton*, section Axillares. Memoirs of the Gray Herbarium 3:1–183.

Fernald, M. L. 1933. Recent Discoveries in the Newfoundland flora. Rhodora 35:1–403 (interrupted).

Fernald, M. L. 1935. Critical plants of the upper Great Lakes region of Ontario and Michigan. Rhodora 37:197–262.

Fernald, M. L. 1950. Gray's Manual of Botany. D. Van Nostrand Company, New York. 8th edition.

Frankton, C., and I. J. Bassett. 1970. The genus *Atriplex* (Chenopodiaceae) in Canada. II. Four native western annuals: *A. argentea, A. truncata, A. powellii* and *A. dioica*. Canadian Journal of Botany 48:981–989.

Fuller, W. A. 1973. The Conservation of Terrestrial Communities Programme in Canada. Syesis 6:11–16.

Gale, S. 1944. *Rhynchospora*, section Eurhynchospora in Canada, the United States and the West Indies. Rhodora 46:89–134, 159–197, 207–278.

Gates, R. R. 1917. A systematic study of the North American genus *Trillium*, its variability and its relationship to *Paris* and *Medeola*. Annals of the Missouri Botanical Garden 4:43–92.

Gillett, G. W. 1960. A systematic treatment of the *Phacelia franklinii* group. Rhodora 62:205–222.

Gillett, G. W. 1962. Evolutionary relationships of *Phacelia linearis*. Brittonia 14:231–236.

Gillett, J.M. 1957. A revision of the North American species of *Gentianella* Moench. Annals of the Missouri Botanical Garden 44:195–269.

Gillett, J. M. 1963. The Gentians of Canada, Alaska and Greenland. Research Branch, Canada Department of Agriculture. Publication 1180.

Gillett, J. M. 1971. The native rhododendrons of Canada and Alaska. Greenhouse-Garden-Grass 10:35–45.

Gillett, J. M. 1976. The St. John's Worts of Canada. Unpublished.

Griffiths, G. C. D., and R. P. Pharis. 1976. The Western Swan Hills – Alberta's Forgotten Wilderness. Alberta Wilderness Association and the Edmonton Chapter of the National and Provincial Parks Association of Canada. Calgary and Edmonton.

Haber, E. 1976. Unpublished maps. National Museum of Natural Sciences, Ottawa.

Harms, V.L. 1973. Violets of Saskatchewan. Blue Jay 31:105–112.

Haynes, R. R. 1974. A revision of North American *Potamogeton* subsection Pusilli (Potamogetonaceae). Rhodora 76:564–649.

Helton, N., D. Wiens, and B. Barlow. 1972. High polyploidy and the origin of *Balsamorhiza macrophylla* (Compositae). Madrono 21:526–535.

Hitchcock, A. S., and A. Chase. 1950. Manual of the grasses of the United States. United States Department of Agriculture. Miscellaneous Publication 200. 2nd edition.

Hitchcock, C. L. , A. Cronquist, M. Ownbey, and J. W. Thompson. 1955–1969. Vascular Plants of the Pacific Northwest. University of Washington Press, Seattle. 5 parts.

Hopkins, M. 1937. *Arabis* in eastern and central North America. Rhodora 39:63–98, 106–148, 155–186.

Hosie, R.C. 1969. Native Trees of Canada. Canadian Forestry Service, Ottawa. 7th edition.

Hu, Shiu-Ying. 1954–1956. A monograph of the genus *Philadelphus*. Journal of the Arnold Arboretum 35:275–333; 36:52–109; 37:15–90.

Hudson, J. H. 1972. The carices of the Sunshine region. Unpublished.

Hudson, J. H. 1977. *Carex* of Saskatchewan. Bison Publishing House. Saskatoon.

Hultén, E. 1958. The amphi-Atlantic plants and their phytogeographical connections. Kungliga Svenska Vetenskapsakademiens Handlingar 7:1–340.

Hultén, E. 1964a. The circumpolar plants. I. Vascular cryptogams, conifers, monocotyledons. Kungliga Svenska Vetenskapsakademiens Handlingar 8:1–275.

Hultén, E. 1964b. The *Saxifraga flagellaris* complex. Svensk Botanisk Tidskrift 58:81–104.

Hultén, E. 1968. Flora of Alaska. Stanford University Press, Stanford.

Hultén. E. 1971. The circumpolar plants. II. Dicotyledons. Kungliga Svenska Vetenskapsakademiens Handlingar 13:1–463.

IBP-CT (International Biological Program-Conservation of Terrestrial Communities). 1974. Check Sheets for Alberta. National Research Council Library, Ottawa.

Jones, Q. 1951. A cytotaxonomic study of the genus *Disporum* in North America. Contributions from the Gray Herbarium 173:1–40.

Johnson, H., and B. Hallworth. 1965. Further discoveries of sand verbena in Alberta. Blue Jay 33:13–15.

Kartesz, J. T., and R. Kartesz. 1977. The Biota of North America. Part 1: Vascular Plants. Volume I: Rare Plants. Biota of North America Committee, Pittsburgh.

Keck, D. D. 1945. Studies in *Penstemon* .VIII. A cytotaxonomic account of the section Spermunculus. American Midland Naturalist 33:128–206

Kershaw, L. 1976. A phytogeographical survey of rare, endangered and extinct vascular plants in the Canadian flora. M. Sc. thesis, University of Waterloo, Ontario. Unpublished.

Kershaw, L., and J.K. Morton. 1976. Rare and potentially endangered species in the Canadian flora – a preliminary list of vascular plants. The Bulletin of the Canadian Botanical Association 9:26–30

Kohli, B., and J. G. Packer. 1976. A contribution to the taxonomy of the *Potentilla pensylvanica* complex in North America. Canadian Journal of Botany 54:706–719.

Kondo, K. 1972. A comparison of variability in *Utricularia cornuta* and *U. juncea*. American Journal of Botany 59:23–37.

Koyama, T., and S. Kawano. 1946. Critical taxa of grasses with North American and eastern Asiatic distribution. Canadian Journal of Botany 42:859–884.

Krajina, V. J. 1968. Sarraceniaceae, a new family for British Columbia. Syesis 1:121–124.

Kuijt, J. 1973. New plant records in Waterton Lakes National Park, Alberta. Canadian Field-Naturalist 87:67–69.

Kuijt, J., and A. Trofymow. 1975. Range extensions of two rare Alberta shrubs. Blue Jay 33:96–98.

Lakela, O. 1937. A monograph of the genus *Tiarella* in North America. American Journal of Botany 24:344–351.

Lang, F. A. 1969. A new name for a species of *Polypodium* from northwestern North America. Madrono 20:53–60.

Lewis, H., and J. Szweykowski. 1964. The genus *Gayophytum* (Onagraceae). Brittonia 16:343–391.

Little, E. L., Jr. 1971. Atlas of United States Trees. Volume 1. Conifers and Important Hardwoods. United States Department of Agriculture, Forest Service. Miscellaneous Publication 1146.

Little, E. L., Jr. 1976. Atlas of United States Trees. Volume 3. Minor Western Hardwoods. United States Department of Agriculture, Forest Service. Miscellaneous Publication 1314.

Löve, D. 1969. *Papaver* at high altitudes in the Rocky Mountains. Brittonia 21:1–10.

Löve, D., and N. J. Freedman. 1956. A plant collection from southwestern Yukon. Botaniska Notiser 109:153–211.

Luer, C. A. 1975. The Native Orchids of the United States and Canada. New York Botanical Garden, Ipswich.

Maguire, B. 1943. A monograph of the genus *Arnica*. Brittonia 4:386–510.

Maher, R. V., G. W. Argus, D. J. White, and V. L. Harms. 1978. The rare vascular plants of Saskatchewan. Syllogeus. In press.

Maher, R. V., D. J. White, G. W. Argus, and P. A. Keddy. 1978. The rare vascular plants of Nova Scotia. Syllogeus. In press.

McDaniel, S. 1971. The genus *Sarracenia* (Sarraceniaceae). Bulletin of the Tall Timbers Research Station 9:1–36.

McGregor, R. L. 1977. Rare native vascular plants of Kansas. State Biological Survey of Kansas, Technical Bulletin No. 5.

McGregor, R. L., and T. M. Barkley, eds. 1977. Atlas of the Flora of the Great Plains. The Iowa State University Press. Ames.

McLaughlin, W. T. 1932. Atlantic coastal plain plants in the sand barrens of northwestern Wisconsin. Ecological Monographs 2:335–383.

McVaugh, R. 1936. Studies in the taxonomy and distribution of the eastern North American species of *Lobelia*. Rhodora 38:241–263, 276–298, 305–329,346–362.

McVaugh, R. 1941. A monograph on the genus *Downingia*. Memoirs of the Torrey Botanical Club 19:1–57.

Meusel, H., E. Jager, and E. Weinert. 1965. Vergleichende chorologie der Zentraleuropaischen Flora. Karten. Jena.

Moore, R. J., and C. Frankton. 1967. Cytotaxonomy of the foliose thistles (*Cirsium* spp. aff. *C. foliosum*) of western North America. Canadian Journal of Botany 45:1733–1749.

Moore, R. J., and C. Frankton. 1974. The Thistles of Canada. Research Branch, Canada Department of Agriculture. Monograph 10.

Moss, E. H. 1944. *Lilaea scillioides* in southeastern Alberta. Rhodora 46:205–206.

Moss, E. H. 1959. Flora of Alberta. University of Toronto Press, Toronto.

Moss, E. H., and G. Pegg. 1963. Noteworthy plant species and communities in westcentral Alberta. Canadian Journal of Botany 41:1079–1105.

Mulligan, G. A. 1970a. Cytotaxonomic studies of *Draba glabella* and its close allies in Canada and Alaska. Canadian Journal of Botany 48:1431–1437.

Mulligan, G. A. 1970b. A new species of *Draba* in the Kananaskis Range of southwestern Alberta. Canadian Journal of Botany 48:1897–1898.

Mulligan, G. A. 1971. Cytotaxonomic studies of *Draba* species of Canada and Alaska: *D. ventosa*, *D. ruaxes* and *D. paysonii*. Canadian Journal of Botany 49:1455–1460.

Mulligan, G. A. 1974. Cytotaxonomic studies of *Draba nivalis* and its close allies in Canada and Alaska. Canadian Journal of Botany 52:1793–1801.

Mulligan, G. A. 1975. Personal communication. May and November.

Mulligan, G. A. 1976. The genus *Draba* in Canada and Alaska: key and summary. Canadian Journal of Botany 54:1386–1393.

Munz, P. A. 1946. The Onagraceae of Wyoming. University of Wyoming Herbarium Leaflet 13:1–20.

Ogilvie, R. T. 1962. Notes on plant distribution in the Rocky Mountains. Canadian Journal of Botany 40:1091–1094.

Ownbey, M. 1940. A monograph of the genus *Calochortus*. Annals of the Missouri Botanical Garden 27:371–560.

Ownbey, M., and H. C. Aase. 1955. Cytotaxonomic studies in *Allium*. I. The *Allium canadense* alliance. Research studies of the State College of Washington. Monograph Supplement 1.

Packer, J. G. 1972. A taxonomic and phytogeographical review of some arctic and alpine *Senecio* species. Canadian Journal of Botany 50:507–518.

Packer, J. G. 1975–1977. Letters dated 14 May 1975, 2 April 1976, 26 January 1977 and 3 November 1977.

Packer, J. G., and M. G. Dumais. 1972. Additions to the flora of Alberta. Canadian Field-Naturalist 86:269–274.

Packer, J. G., and D. H. Vitt. 1974. Mountain Park: a plant refugium in the Canadian Rocky Mountains. Canadian Journal of Botany 52:1393–1409.

Phillips, L. L. 1955. A revision of the perennial species of Lupines of North America. Research Studies of the State College of Washington 23:161–201.

Porsild, A. E. 1950. The genus *Antennaria* in northwestern Canada. Canadian Field-Naturalist 64:1–25.

Porsild, A. E. 1955. The Vascular Plants of the Western Canadian Arctic Archipelago. National Museum of Canada. Bulletin 135.

Porsild, A. E. 1959. Botanical excursion to Jasper and Banff National Parks, Alberta. National Museum of Canada, Ottawa.

Porsild, A. E. 1963. *Stellaria longipes* Goldie and its allies in North America. National Museum of Canada. Bulletin 186:1–35.

Porsild, A. E. 1964. Illustrated Flora of the Canadian Arctic Archipelago. National Museum of Canada. Bulletin 146. 2nd edition.

Porsild, A. E. 1965. The genus *Antennaria* in eastern arctic and subarctic America. Botanisk Tidsskrift 61:22–55.

Porsild, A. E. 1966. Contributions to the flora of southwestern Yukon Territory. National Museum of Canada. Bulletin 216.

Porter, C. L. 1944. The Rhamnaceae of Wyoming. University of Wyoming Herbarium Leaflet 7:1–4.

Porter, C. L. 1946. The Apiaceae of Wyoming. University of Wyoming Herbarium Leaflet 16:1–39.

Porter, C. L. 1950. The grasses of Wyoming. University of Wyoming Herbarium Leaflet 20:1–175.

Ramaley, F. 1939. Sand hill vegetation of northeastern Colorado. Ecological Monographs 9:1–51.

Raup, H. M. 1947. The botany of southwestern Mackenzie. Sargentia 6:1–275.

Raup, H. M. 1959. The willows of boreal western America. Contributions from the Gray Herbarium 185:1–95.

Raven, P. H., and D. M. Moore. 1965. A revision of *Boisduvalia* (Onagraceae). Brittonia 17:238–254.

Rigby, S. J., and D. M. Britton. 1970. The distribution of *Pellaea* in Canada. Canadian Field-Naturalist 84:137–144.

Rollins, R. C. 1941. Monographic study of *Arabis* in western North America. Rhodora 43:289–325, 348–411, 425–481.

Rossbach, R. P. 1940. *Spergularia* in North and South America. Rhodora 42:57–83, 105–143, 158–193, 203–213.

Russel, N. H. 1956. Morphological variation in *Viola selkirkii* Pursh. Castanea 21:53–62.

Scotter, G. W. 1976. Letter dated 8 January.

Scotter, G. W., and J. H. Hudson. 1975. *Carex illota* L. H. Bailey in Alberta. Canadian Field-Naturalist 89:74–75.

Sculthorpe, C. 1967. Biology of Aquatic Vascular Plants. Edward Arnold, London.

Shaw, K. 1966. A new species of *Oxytropis* for Alberta. Blue Jay 24:40.

Sherrington, P. 1975. Calgary's Natural Areas: A Popular Guide. Calgary Field Naturalist's Society, Calgary.

Siddall, J. L. 1977. Field checking progress report to field botanists on 'Provisional list of rare, threatened and endangered plants in Oregon'. Including additions to the provisional list. Mimeo.

Smithsonian Institution. 1975. Report on endangered and threatened plant species of the United States. Serial No. 94–A, United States Government Printing Office.

St. John, H. 1962. Monograph of the genus *Elodea* (Hydrocharitaceae) Part 1. The species found in the Great Plains, the Rocky Mountains and the Pacific States and Provinces of North America. Research Studies of the State College of Washington 30:19–44.

St. John, H. 1965. Monograph of the genus *Elodea*: Part 4 and summary. Rhodora 67:1–35, 155–180.

Svenson, H. K. 1939. Monographic studies in the genus *Eleocharis*. V. Rhodora 41:1–19, 43–77, 90–110.

Taylor, R. L. 1965. The genus *Lithophragma* (Saxifragaceae). University of California Publications in Botany 37:1–122.

Taylor, T. M. C. 1970. Pacific Northwest Ferns and their Allies. University of Toronto Press, Toronto.

Thomas, J. L. 1976. Plants. pp. 5–12. *In* H. Boschung, ed. Endangered and Threatened Plants and Animals of Alabama. Alabama Museum of Natural History, Bulletin No. 2.

Thompson, L. S., and J. Kuijt. 1976. Montane and subalpine plants of the Sweetgrass Hills, Montana, and their relation to early postglacial environments of the northern Great Plains. Canadian Field-Naturalist 90:432–448.

Tisdale, E. W., and A. C. Budd. 1948. Range extensions for three grasses in western Canada. Canadian Field-Naturalist 62:173–175. Tryon, A. F. 1957. A revision of the fern genus *Pellaea* section Pellaea. Annals of the Missouri Botanical Garden 44:125–193.

Tryon, A. F. 1972. Spores, chromosomes and relations of the fern *Pellaea atropurpurea*. Rhodora 74:220–242.

Tryon, R. M. 1941. Revision of the genus *Pteridium*. Rhodora 43:1–31, 37–70.

Tryon, R. M. 1955. *Selaginella rupestris* and its allies. Annals of the Missouri Botanical Garden 42:1–99.

Turner, B. L. 1956. A cytotaxonomic study of the genus *Hymenopappus* (Compositae). Rhodora 58:163–186, 208–242, 250–269, 295–308.

UAC. Herbarium, University of Calgary, Calgary, Alberta.

United States. 1976. Endangered and threatened species. Plants. Federal Register 41(117).24524–24572. June 16.

University of Alberta. 1975. Distribution maps of the Alberta range of rare plants on the Preliminary List of the Rare Plants of Alberta. Provided with annotation by M.G. Dumais. Unpublished.

Vermont. 1972. An act to provide for the preservation of certain endangered species. No. 159. Regulations under Vermont Statutes Annotated 13, Section 3642.

Wagner, W. H., E. G. Voss, J. H. Beaman, E. A. Bourdo, F. W. Case, J. A. Churchill, and P. W. Thompson. 1977. Endangered, threatened and rare vascular plants in Michigan. Michigan Botanist 16:99–110.

Wagnon. H. K. 1952. A revision of the genus *Bromus*, section Bromopsis, of North America. Brittonia 7:415–480.

Wallis, C. 1977. Preliminary lists of the rare flora and fauna of Alberta. Alberta Department of Recreation, Parks and Wildlife. Mimeographed.

Ward, G. H. 1953. *Artemisia*, section Seriphidium, in North America. A cytotaxonomic study. Contributions of the Dudley Herbarium 4:155–205.

Weir, J. F. 1974. Letter dated 7 February.

Welsh, S. L. 1960. Legumes of the north-central States: Galegeae. Iowa State Journal of Science 35:111–250.

Wherry, E. T. 1955. The Genus *Phlox*. Morris Arboretum Monograph 3, Philadelphia.

Woodson, R. E. 1954. The North American species of *Asclepias* L. Annals of the Missouri Botanical Garden 41:1–208.

Wynne, F. E. 1944. *Drosera* in eastern North America. Bulletin of the Torrey Botanical Club 71:166–174.

Young, S. B. 1971. The vascular flora of St. Lawrence Island with special reference to floristic zonation in the Arctic regions. Contributions from the Gray Herbarium 201:11–115.

Appendix I
Excluded Plants

Achillea megacephala *Raup - (Boivin 1967, Kershaw & Morton 1976) - unconfirmed report.*

Astragalus sericoleucus *Gray - (Senn 1938) - unconfirmed by Barneby 1952 and Boivin 1967.*

Boisduvalia densiflora *(Lindl.) Wats. - (Boivin 1967) - label error (Boivin 1967-72)*

Carex abdita *Bickn. - (Kershaw & Morton 1976) - locality probably incorrect (CAN).*

Carex nesophila *Holm. - (Kershaw & Morton 1976) - unconfirmed by Boivin 1967.*

Carex williamsii *Britt. - (Kershaw & Morton 1976) - unconfirmed by Boivin 1967.*

Crataegus columbiana *Howell - (Ogilvie 1962) - unconfirmed report.*

Cryptantha sobolifera *Payson - (Kershaw & Morton 1976, Ogilvie 1962) - misidentification (Boivin 1967-72).*

Deschampsia mackenzieana *Raup - (Kershaw & Morton 1976) - unconfirmed report.*

Draba cinerea *Adams - (Packer & Dumais 1972, Porsild 1959) - unconfirmed by Mulligan 1976.*

Eleocharis rostellata *Torr. - (Moss 1959) - unconfirmed report.*

Erigeron uncialis *Blake var.* conjugans *(Blake) Crong. - (Kershaw & Morton 1976, Packer & Dumais 1972, Porsild 1959) - misidentification (Boivin 1967-72).*

Eriogonum flavum *Nutt. var.* piperi *(Greene) M. E. Jones - (Ogilvie 1962, Packer & Dumais 1972) - probable misidentification (CAN).*

Gymnocarpium robertianum *(Hoffm.) Newm. - (Moss 1959) - weak variety or form of* Carpogymnia dryopteris *(Boivin 1967-72).*

Hutchinsia procumbens *(L.) Desv. - (Boivin 1967-72) - unconfirmed report.*

Hypericum formosum *HBK. var.* scouleri *(Hook.) Coult. - (Ogilvie 1962) - unconfirmed report.*

Limosella subulata *Ives - (Bolvin 1967-72) - unconfirmed by Boivin 1967-72.*

Lupinus lepidus *Dougl. - (Packer & Dumais 1972) - erroneous report (Gillett, pers. comm.).*

Prunus nigra *Ait. - (Kershaw 1976) - misidentification (Cody in DAO)*

Rumex arcticus *Trautv. - (Kershaw & Morton 1976) - misidentification (Dawson in CAN).*

Salix reticulata *L. - (Packer & Dumais 1972, Porsild 1959) - probable misidentification (Argus).*

Sparganium fluctuans *(Morong) Robins. - (Moss 1959) - unconfirmed report.*

S. hyperboreum *Laestad. - (Packer & Dumais 1972, Porsild 1959) - probable misidentification.*

Appendix II
Alien or Doubtfully Native Plants

Alopecurus geniculatus *L.*
Bidens comosa *(Gray) Wieg.*
Chenopodium subglabrum *Nels.*
Draba reptans *(Lam.) Fern.*
Linanthus septentrionalis *H. L. Mason*
Mirabilis nyctaginea *(Michx.) MacM.*
Myosotis laxa *Lehm.*
Rorippa sinuata *(Nutt.) Hitchc.*
Sagina decumbens *(Ell.) T. & G.*
Sagina procumbens *L.*
Schoenocrambe linifolia *(Nutt.) Greene*
Sporobolus neglectus *Nash*

Appendix III
List of the Rare Vascular Plants of Alberta in Taxonomic Sequence

LYCOPODIACEAE

Lycopodium sabinaefolium ssp. *sitchense*
L. sitchense
L. inundatum

SELAGINELLACEAE

Selaginella wallacei

ISOETACEAE

Isoetes bolanderi

OPHIOGLOSSACEAE

Botrychium boreale
B. lanceolatum var. lanceolatum

POLYPODIACEAE

Adiantum pedatum var. aleuticum
Athyrium alpestre
A. distentifolium ssp. americanum
Cheilanthes feei
C. gracillima
Dryopteris cristata
D. filix-mas
D. fragrans
D. phegopteris
Pellaea atropurpurea
Phegopteris polypodioides
Polypodium hesperium
P. vulgare var. columbianum
Pteridium aquilinum var. pubescens
Thelypteris phegopteris
Woodsia glabella
W. ilvensis

TAXACEAE

Taxus brevifolia

PINACEAE

Larix occidentalis
Pinus monticola
Thuja plicata

SPARGANIACEAE

Sparganium glomeratum

POTAMOGETONACEAE

Potamogeton obtusifolius
P. pusillus var. tenuissimus
P. robbinsii
P. strictifolius
Ruppia occidentalis
R. spiralis

JUNCAGINACEAE

Lilaea scilloides

HYDROCHARITACEAE

Elodea longivaginata

GRAMINEAE

Agropyron scribneri
A. violaceum ssp. andinum
Agrostis borealis
A. humilis
Aristida longiseta var. robusta
Bromus purgans
Calamagrostis lapponica var. neoarctica
Elymus arenarius ssp. *mollis*
E. mollis
E. virginicus
Festuca occidentalis var. occidentalis
F. subulata
F. viridula
Glyceria elata
G. pauciflora
Hierochloe alpina
Hordeum brachyantherum
H. jubatum var. *boreale*
H. nodosum
H. pusillum
Melica smithii
M. spectabilis
Muhlenbergia asperifolia
Munroa squarrosa
Oryzopsis canadensis
O. exigua
O. micrantha
Panicum leibergii
P. occidentale
P. thermale
P. wilcoxianum
Poa lanata
P. stenantha
Puccinellia hauptiana
P. pauciflora
Schedonnardus paniculatus
Trisetum canescens
T. cernuum
T. montanum
T. wolfii

CYPERACEAE

Carex athabascensis
C. eleusinoides
C. enanderi
C. eurystachya
C. glacialis
C. gymnoclada
C. illota
C. maritima var. maritima
C. mertensii
C. misandra
C. paysonis
C. petricosa
C. scopulorum
C. supina ssp. spaniocarpa
C. trisperma
Eleocharis elliptica
Eriophorum callitrix
Rhynchospora alba
R. capillacea
Scirpus atrovirens var. *pallidus*
S. clintonii
S. fluviatilis
S. pallidus

JUNCACEAE

Juncus stygius ssp. americanus
Luzula acuminata
L. arcuata

LILIACEAE

Allium geyeri
Calochortus apiculatus
Disporum hookeri var. *oreganum*
D. oreganum
Streptopus streptopoides
Tofieldia coccinea
Trillium ovatum
Yucca glauca

IRIDACEAE

Iris missouriensis

ORCHIDACEAE

Cypripedium acaule
C. montanum
Habenaria saccata
Hammarbya paludosa
Listera caurina
L. convallarioides
Malaxis monophyllos var. brachypoda
M. paludosa
Platanthera saccata
P. stricta

SALICACEAE

Populus angustifolia
Salix calcicola
S. lanata ssp. calcicola
S. sitchensis
S. stolonifera
S. tyrrellii

POLYGONACEAE

Eriogonum cernuum
Koenigia islandica
Polygonum austinae
P. engelmannii
P. minimum

CHENOPODIACEAE

Atriplex aptera
A. canescens var. *aptera*

A. powellii
A. truncata
Suckleya suckleyana

NYCTAGINACEAE

Abronia micrantha

PORTULACACEAE

Claytonia linearis
C. parviflora
Lewisia pygmaea
Montia linearis
M. parvifolia

CARYOPHYLLACEAE

Arenaria humifusa
A. nuttallii
Melandrium affine
Sagina nodosa
Silene douglasii
S. involucrata
Spergularia marina
Stellaria americana
S. arenicola
S. nitens
S. obtusa
S. umbellata

RANUNCULACEAE

Anemone nemorosa var. bifolia
A. quinquefolia var. *interior*
Aquilegia jonesii
Myosurus aristatus
M. minimus var. *aristatus*
Ranunculus nivalis
R. occidentalis var. brevistylis
R. verecundus

PAPAVERACEAE

Papaver freedmanianum
P. kluanensis
P. nudicaule var. *coloradense*
P. pygmaeum

CRUCIFERAE

Braya purpurascens
Cardamine parviflora var. arenicola
C. pratensis var. palustris
Draba densifolia
D. fladnizensis
D. glabella
D. hirta
D. kananaskis
D. lactea
D. longipes
D. stenopetala
D. ventosa
D. verna
Erysimum pallasii
Halimolobos virgata
Lesquerella alpina
Thellungiella salsuginea

SARRACENIACEAE

Sarracenia purpurea

DROSERACEAE

Drosera linearis

SAXIFRAGACEAE

Conimitella williamsii
Hemieva ranunculifolia
Heuchera glabra
Lithophragma parviflora
Philadelphus lewisii
Ribes inerme
R. laxiflorum
R. oxyacanthoides var. *saxosum*
R. viscosissimum
Saxifraga arguta
S. debilis
S. flagellaris
S. mertensiana
S. odontoloma
S. oregana var. subapetala
S. subapetala
Suksdorfia ranunculifolia
S. violacea
Telesonix jamesii var. heucheriformis
Tiarella trifoliata

ROSACEAE

Crataegus douglasii
Fragaria vesca var. bracteata
Luetkea pectinata
Physocarpus malvaceus
Potentilla egedii ssp. *yukonensis*
P. finitima
P. yukonensis
Spiraea densiflora var. splendens

LEGUMINOSAE

Astragalus kentrophyta
A. lotiflorus
A. purshii var. purshii
Lupinus arbustus ssp. pseudoparviflorus
L. arcticus ssp. subalpinus
L. minimus
L. nootkatensis
L. polyphyllus
L. wyethii
Oxytropis lagopus var. conjugans

GERANIACEAE

Geranium erianthum
G. pratense var. *erianthum*

POLYGALACEAE

Polygala paucifolia

CELASTRACEAE

Pachistima myrsinites

RHAMNACEAE

Ceanothus velutinus

MALVACEAE

Iliamna rivularis

GUTTIFERAE

Hypericum formosum var. nortoniae

VIOLACEAE

Viola selkirkii

ONAGRACEAE

Boisduvalia glabella
Camissonia andina
C. breviflora
Epilobium glaberrimum
E. luteum
E. platyphyllum
Gayophytum humile
G. racemosum
Oenothera andina
O. breviflora
O. caespitosa var. psammophila
O. flava
O. psammophila

HIPPURIDACEAE

Hippuris montana

UMBELLIFERAE

Angelica dawsonii
Bupleurum americanum
B. triradiatum ssp. *arcticum*
Lomatium cous
L. sandbergii
Osmorhiza aristatus var. *longistylis*
O. chilensis var. *purpurea*
O. longistylis
O. occidentalis
O. purpurea

ERICACEAE

Gaultheria humifusa
Hypopitys monotropa
Loiseleuria procumbens
Montropa hypopitys
Pterospora andromedea
Pyrola bracteata
P. picta
Rhododendron lapponicum

PRIMULACEAE

Androsace occidentalis
Centunculus minimus
Douglasia montana
Primula egaliksensis
P. stricta

GENTIANACEAE

Gentiana aquatica
G. calycosa var. obtusiloba
G. detonsa var. *raupii*
G. tremonti
G. glauca
G. raupii
Gentianella detonsa ssp. raupii

ASCLEPIADACEAE

Asclepias viridiflora

POLEMONIACEAE

Microsteris gracilis
Phlox alyssifolia
P. gracilis
Polemonium viscosum

HYDROPHYLLACEAE

Hydrophyllum capitatum
Nemophila breviflora
Phacelia linearis
P. lyallii

BORAGINACEAE

Cryptantha affinis
Mertensia longiflora

SCROPHULARIACEAE

Castilleja cusickii
C. pallescens
Mimulus floribundus
M. guttatus
M. lewisii
Pedicularis arctica
P. flammea
P. kanei
P. lanata
P. langsdorfii ssp. *arctica*
P. macrodonta
P. parviflora
P. racemosa var. alba
Penstemon albertinus
P. fruiticosus ssp. scouleri
P. lyallii

OROBANCHACEAE

Orobanche ludoviciana
O. uniflora

LENTIBULARIACEAE

Utricularia cornuta

PLANTAGINACEAE

Plantago canescens
P. maritima
P. patagonica var. spinulosa
P. septata
P. spinulosa

RUBIACEAE

Galium palustre

CAMPANULACEAE

Downingia laeta
Lobelia dortmanna
L. spicata

COMPOSITAE

Adenocaulon bicolor
Agoseris grandiflora
Ambrosia acanthicarpa
Antennaria acuta
A. alpina var. media
A. angustata
A. corymbosa
A. luzuloides
A. media
A. monocephala ssp. *angustata*
A. monocephala ssp. monocephala
Arnica alpina ssp. angustifolia
A. parryi
Artemisia borealis
A. campestris ssp. borealis
A. tridentata
Aster maccallae
A. pauciflorus
A. tanacetifolius
Bahia oppositifolia
Balsamorhiza sagittata
Brickellia grandiflora
Chrysanthemum bipinnatum ssp. *huronense*
Chrysothamnus nauseosus
Cirsium hookerianum var. *scariosum*
C. scariosum
Crepis atrabarba
E. evermanii
E. flagellaris
E. ochroleucus
E. pallens
E. radicatus
E. scotteri
Eupatorium purpureum var. maculatum
Franseria acanthicarpa
Gnaphalium microcephalum var. thermale
G. viscosum
Hymenopappus filifolius var. polycephalus
Lygodesmia rostrata
Machaeranthera tanacetifolius
Microseris cuspidata
M. nutans
Prenanthes alata
P. sagittata
Saussurea americana
Senecio conterminus
S. foetidus var. foetidus
S. foetidus var. *hydrophiloides*
S. hydrophiloides
S. megacephalus
Stephanomeria runcinata
S. tenuifolia
Tanacetum huronense var. bifarium
Thelesperma marginatum
T. subnudum
Townsendia condensata

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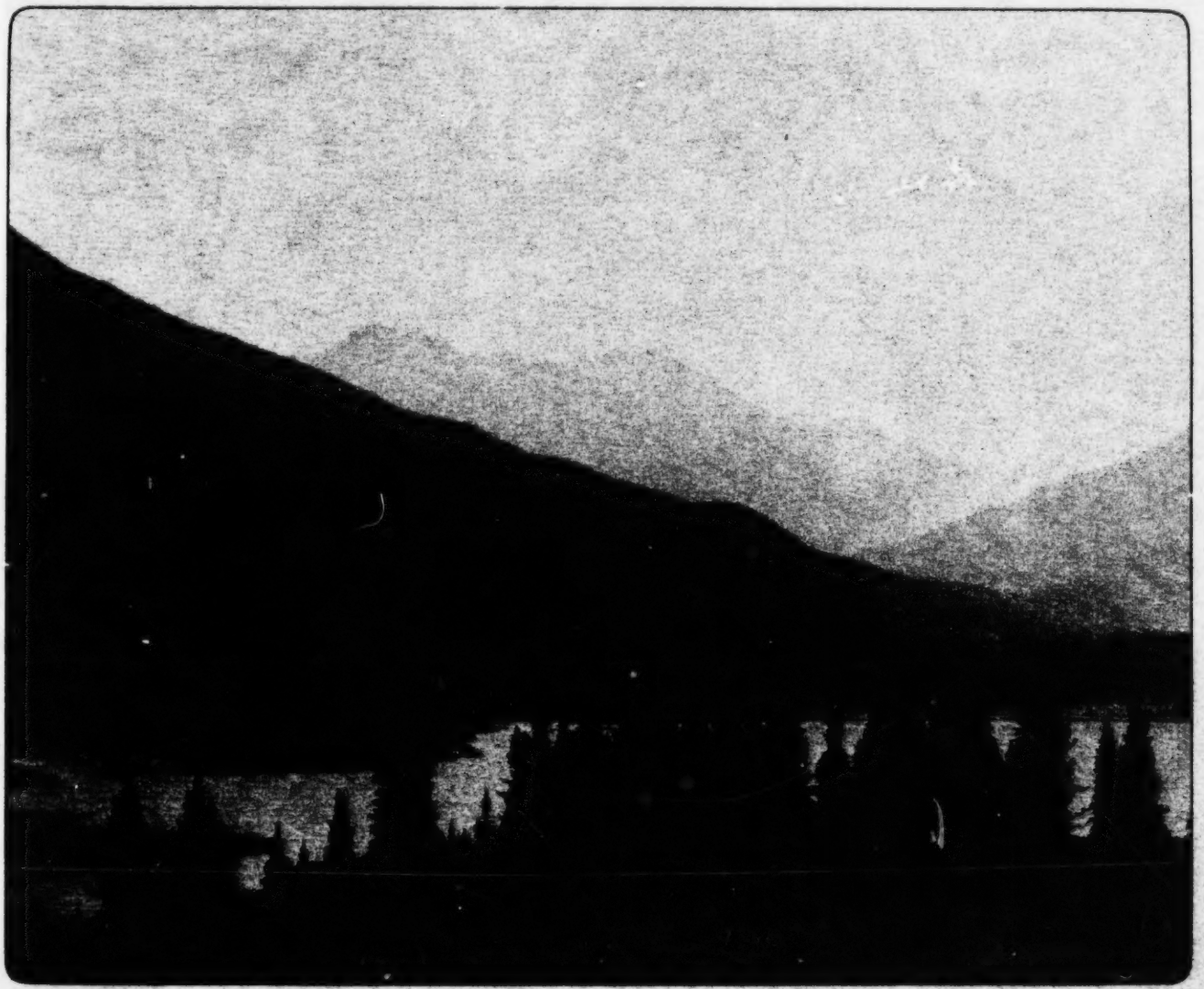
George W. Argus et David J. White



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ISSN 0704-576X

LES PLANTES VASCULAIRES RARES DE L'ALBERTA

George W. Argus et David J. White

Division de la Botanique
Musée national des Sciences naturelles
Ottawa, Ontario K1A 0M8

Mai 1978

Une contribution canadienne au programme de l'Unesco,
L'Homme et la biosphère

PREFACE

Cette liste est la deuxième d'une série de contributions traitant des plantes vasculaires rares des provinces et territoires du Canada. Une version préliminaire l'a précédée, qui a servi de moyen de communication avec la collectivité botaniste et naturaliste de l'Alberta. Il a circulé une cinquantaine de listes sur lesquelles nous avons reçu des observations dont nous avons tenu compte dans la présente liste. Pour ceux qui souhaiteraient contribuer à l'établissement des listes définitives annotées pour d'autres provinces, nous avons encore en main des listes préliminaires des plantes rares de la Colombie-Britannique, de la Saskatchewan, du Manitoba, du Québec, ainsi que de Terre-Neuve et du Labrador.

L'introduction à la Liste des plantes vasculaires rares de l'Alberta est en deux parties. La première (sections A àE) s'applique de façon générale à toutes les listes de plantes rares, tandis que la deuxième (sections F à I) contient l'information relative à la liste de l'Alberta. Cette introduction est suivie de la liste des plantes vasculaires rares de l'Alberta, d'une bibliographie et de plusieurs annexes.

Nous nous rendons compte que pour un grand nombre des plantes énumérées, notre information est insuffisante et qu'il reste fort à faire avant d'atteindre nos objectifs finals. Toutefois, nous avons tenté de réunir les meilleurs renseignements disponibles à l'heure actuelle, dans l'espoir qu'ils pourront servir à ceux qui s'intéressent à la protection des plantes rares ou menacées d'extinction et du milieu naturel. Nous espérons recevoir des commentaires et des suggestions et publier des versions révisées à mesures que s'étendront nos connaissances sur les plantes vasculaires rares de l'Alberta.

George W. Argus

David J. White

August 1977

RÉVISIONS ET OBSERVATIONS

Priére de faire parvenir toute communication

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Programme portant sur les plantes rares et menacées

Division de la Botanique

Musée national des Sciences naturelles

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Il y a lieu de joindre toute la documentation possible aux demandes de radiation ou d'inscription de plantes sur la liste.

TABLE DES MATIERES

2 Préface

7 Introduction

A. Listes préliminaires 7
B. Définitiones 7
C. Présentation des listes 7
D. Utilité des listes 9
E. Projets d'avenir 9
F. Liste des plantes rares de l'Alberta 9
G. La protection des plantes rares en Alberta 10
H. Modes de répartition des plantes rares en Alberta 11
I. Remerciements 12

13 Liste des plantes vasculaires rares de l'Alberta

39 Bibliographie

44 Les annexes

I. Plantes retranchées 44
II. Plantes probablement ou sûrement allogènes. 44
III. Liste des plantes vasculaires rares de l'Alberta dans l'ordre taxonomique 45

INTRODUCTION

On admet depuis longtemps la nécessité de réunir des données scientifiques sur les plants rares et menacées d'extinction du Canada afin de justifier les mesures écologiques qui les protégeraient éventuellement. En 1973, la section de taxonomie et de phytogéographie de l'Association canadienne de Botanique formait donc un comité des plantes rares et menacées d'extinction du Canada. Pour sa part, l'Herbier national entreprenait alors de rassembler des données sur les plantes rares des divers territoires et provinces. Une fois terminé, l'inventaire général devrait servir non seulement à la préservation d'espèces individuelles, mais aussi à la délimitation des aires qui, renfermant une flore unique en son genre à cause de l'habitat ou du climat, ont besoin de protection. Certaines plantes qui naguère appartenaient à la flore du Canada ont disparu ou ont été extirpées au cours des 75 dernières années. D'autres plantes sont devenues tellement rares qu'elles sont en voie de disparition complète, et certains habitats jadis étendus se sont tellement modifiés que la survivance de mainte espèce s'en trouve menacée. Même si la préservation de certaines espèces peut être assurée au niveau individuel (dans les jardins botaniques, par exemple), il faudra dans la plupart des cas désigner des aires géographiques assez vastes pour protéger l'habitat de ces plantes uniques en leur genre.

Faute de données suffisantes dans la plupart des cas pour établir jusqu'à quel point les plantes de la flore canadienne sont menacées, nous n'avons retenu que les plantes rares pour la compilation de ces listes. À mesure qu'avançait le travail, nous avons pris conscience de la pénurie de données, même sur les plantes rares, et du besoin urgent d'études sur place et de recherches taxonomiques et phytogéographiques sur les plantes rares du Canada.

Si nous avons décidé d'établir un inventaire pour chaque province et territoire plutôt qu'une liste nationale unique, c'est pour diverses raisons. Tout d'abord, il existe plus de renseignements (dans la littérature, les données et les cartes inédites, aussi bien que d'après notre propre expérience) au niveau régional qu'au niveau national. D'autre part, si les plantes doivent être protégées par des mesures législatives, la chose relève des provinces et il importe d'offrir aux autorités provinciales le plus de renseignements possible. Certaines provinces ont déjà légiféré dans ce sens (Argus 1977), mais il leur faut quand même une liste bien documentée des plantes à protéger. Bien plus, il importe d'avoir des données sur les plantes rares dans chaque région — qu'elles le soient ou non ailleurs — afin de déterminer les aires naturelles qui exigent une attention particulière au sein de ces régions.

A. Listes préliminaires

La préparation des listes de plantes rares a débuté par la compilation de listes préliminaires. Cette compilation a été faite à partir de la littérature sur les flores régionales et locales (y compris les monographies, les communications de phytogéographie et les revues consacrées à la botanique et aux sciences naturelles), des listes de contrôle préparées pour le Programme biologique international de la conservation des milieux biologiques terrestres (IBP-CT), des communications personnelles et des spécimens d'herbier. Les listes préliminaires ont été distribuées à des botanistes et à des naturalistes qui ont été invités à faire des observations et à fournir des renseignements supplémentaires. La réponse encourageante que nous avons reçue a contribué considérablement à l'inventaire final.

B. Définitions

Dans le présent texte, le mot *plante* désigne l'ensemble des individus auxquels on peut attribuer un nom de plante.

Une plante est dite *rare* lorsqu'elle ne représente qu'une faible population dans la province ou le territoire, qu'elle est concentrée dans une aire réduite ou qu'elle est dispersée dans une vaste région. Une aire est dite *réduite* lorsque sa superficie est comparable au coin sud-ouest de l'Alberta, du parc national des Lacs Waterton jusqu'à Crowsnest Pass et Pincher Creek, ou à la lisière qui va de Cardston à Manyberries et jusqu'à la frontière internationale au sud.

Une plante est dite *menacée* s'il est probable qu'elle sera en voie de disparition dans un avenir prévisible, dans l'ensemble ou dans une partie considérable de l'aire qu'elle occupe dans la province ou le territoire.

Une plante est dite *menacée d'extinction* lorsqu'elle est menacée d'éradication dans l'ensemble ou dans une partie considérable de l'aire qu'elle occupe dans la province ou le territoire.

C. Présentation des listes

Les plantes sont énumérées dans l'ordre alphabétique des noms scientifiques. Chaque rubrique comporte, dans la mesure du possible, les renseignements suivants: synonymes, références justifiant le titre de plante rare ou menacée d'extinction, distribution en Amérique du Nord, distribution dans la province à l'étude, renvois à des cartes distributives publiées ou inédites, brèves remarques sur l'habitat, observations

relatives à sa rareté et à sa menance d'extinction en Amérique du Nord et sa protection.

Les plantes sont inscrites seulement s'il s'agit de plantes indigènes et rares dans la province ou le territoire concerné, sans égard à sa présence dans les autres provinces et territoires. On tient compte des espèces, des sous-espèces et des variétés, mais non des types ou des hybrides.

La nomenclature des listes n'est fondée sur aucune source particulière faisant autorité et les synonymes sont indiqués seulement au besoin pour assurer la compréhension des renvois.

Afin de justifier le mieux possible l'inscription des plantes dans la liste, nous mentionnons les sources pertinentes pour chaque rubrique. Il peut s'agir d'une communication publiée comportant une carte distributive, ou encore d'une observation dans une flore locale, d'une communication émanant d'un expert, de spécimens figurant dans un herbier, voire d'une carte distributive sur laquelle nous nous sommes fondés. Dans certains cas, la documentation est complète et péremptoire, tandis que dans d'autres elle est superficielle ou désuète et doit donc être vérifiée ou développée. Nous avons inscrit toutes les plantes dont nous avons pu justifier la rareté par une référence valable, préférant pour le moment pécher par excès plutôt que par insuffisance. En général, nous n'avons pas vérifié l'identification des spécimens utilisés pour étayer les rapports et les cartes distributives. Toutefois, tous les spécimens cités ont été au moins examinés et comparés à d'autres. A mesure que les listes seront épurées, les spécimens seront étudiés et les erreurs corrigées.

Nous gardons un dossier des plantes inscrites puis radiées, où sont indiqués les motifs de la radiation. Deux des annexes contiennent les noms de certaines de ces plantes. L'annexe I (Plantes retranchées) comprent les plantes radiées parce que leur inscription découlait d'une erreur d'identification ou d'étiquetage, ou à cause de l'absence de spécimens à l'appui. L'annexe II (Plantes probablement ou sûrement allogènes) comprend les plantes que l'on sait ou que l'on soupçonne d'être étrangères à la province.

L'aire de distribution en Amérique du Nord est indiquée pour chaque plante. Au Canada et en Alaska elle est exprimée en termes de province, en deux étages traversant la région à peu près d'ouest en est.

Le premier va de l'Alaska aux Territoires du Nord-Ouest (Alas-Y-TNO) et le second, de la Colombie-Britannique au Labrador (CB-Alta-Sask-Man-Ont-Qué-NB-IPE-NE-TN-Lab). Le tiret indique une distribution continue, la virgule, une distribution discontinue. L'étage de l'Alaska et des Territoires du Nord-Ouest fait exception: il est toujours suivi d'une virgule pour marquer la fin du premier étage. L'aire de distribution aux Etats-Unis suit un point et virgule. Elle est circonscrite par une liste d'États ou de régions situés au sud de l'aire canadienne. Là encore, la virgule indique une distribution discontinue. La répartition de la plante dans la province est basée sur les herbiers. Elle peut être indiquée par le nom d'une localité, d'un comté, d'un parc national ou provincial, ou par une série de noms de localités qui délimitent à peu près son aire dans la province.

On renvoie à des cartes distributives publiées ou inédites dans le plus grand nombre de cas possible. Si une carte ne présente qu'une partie de l'aire que la plante occupe en Amérique du Nord, cette partie est indiquée après la référence. Il y a exception dans le cas des cartes désignées par la mention "Univ. of Alta 1975" qui sont toutes de l'Alberta. On est en train de rassembler un atlas des cartes distributives des plantes vasculaires rares du Canada que les personnes intéressées peuvent consulter.

Lorsqu'il existe des renseignements sur l'habitat général de la plante, ils sont insérés dans une brève remarque.

Il peut y avoir également des observations sur la rareté de la plante (qu'elle soit menacée, menacée d'extinction ou éliminée) dans d'autres provinces ou aux Etats-Unis. L'indication sur la situation au Canada précède celle sur la situation aux Etats-Unis. L'expression *rare au Canada* s'applique uniquement aux plantes figurant sur les listes publiées des plantes rares de chaque province, c'est-à-dire celles de l'Ontario (Argus et White 1977), de la Nouvelle-Ecosse (Maher, White, Argus et Keddy 1978) et de la Saskatchewan (Maher, Argus, White et Harms 1978). Comme nous n'avons utilisé aucune information inédite, il se peut qu'un certain nombre d'espèces soient ajoutées à cette catégorie au fur et à mesure que seront complétées les listes des autres provinces.

L'indication de la situation aux Etats-Unis est basée sur le compendium des listes fédérales et régionales compilées par Kartesz et Kartesz (1977), ainsi que sur de la littérature supplémentaire ou plus récente concernant les Etats suivants: Alabama (Thomas 1976), Michigan (Wagner et al. 1977), Kansas (McGregor 1977), Montana (Dorn 1977), Sweetgrass Hills, Montana (Thompson and Kuijt 1976), Oregon (Siddall 1977) et Tennessee (Collins et al. 1976).

On indique enfin les mesures de protection dont la plante fait l'objet au Canada et aux Etats-Unis. Dans le cas des Etats-Unis, nos indications sont basées sur McGaugh et Genoways (1976), Kartesz et Kartesz (1977) et Vermont (1972).

D. Utilité des listes

Nous espérons que ces listes fourniront une partie des données de base nécessaires à la protection des plantes rares et de leurs habitats. Nous croyons qu'elles seront surtout utiles comme source de sujets d'étude pour les comités provinciaux et fédéraux des plantes rares et menacées d'extinction: c'est pourquoi nous avons indiqué les références à l'appui de chaque inscription. Les plantes recensées devraient éventuellement faire l'objet de vérifications sur place et de cartes exécutées par les botanistes et les naturalistes locaux. Ce sera là un pas important vers l'évaluation de l'état des populations de plantes rares, vers la définition de leurs besoins écologiques et vers la surveillance des éléments qui menacent leur existence.

Bien qu'il faille considérer ces listes comme provisoires, elles seront peut-être utiles aux planificateurs et aux décideurs en matière de gestion du terriroire en leur indiquant les plantes qui appellent certains égards lors de l'évaluation des projets de mise en valeur.

E. Projets d'avenir

Au Musée national des Sciences naturelles, nous avons commencé à recueillir, à emmagasiner et à publier des données sur la distribution, l'état des populations et les besoins écologiques des plantes rares du Canada. L'un des projets les plus importants consistera à cartographier, d'après la date de collection, les spécimens d'herbier afin d'encourager la vérification sur place de l'état actuel des populations. Les zones comportant des plantes rares seront délimitées et les besoins de protection des flores ou des habitats uniques en leur genre seront définis. Nous espérons que le Musée national deviendra un centre de renseignements de toutes sortes sur les plantes rares. Les dossiers sont à la disposition de tous les intéressés et nous projetons de publier régulièrement des rapports et des listes à jour sur des régions ou sur des plantes particulières. Nous espérons aider les botanistes locaux à signaler l'existence de plantes menancées d'extinction aux autorités compétentes afin qu'elles prennent les mesures de protection voulues.

Il est clair qu'aucun groupe ou individu ne connaît la flore du Canada suffisamment pour mener à bien un projet d'une telle ampleur sans l'aide de tous les botanistes et naturalistes. Nous vous prions de bien vouloir nous faire partager vos connaissances en nous communiquant vos observations sur la présente liste. Les inscriptions ou radiations proposées doivent être étayées par une solide documentation. S'il existe un spécimen, il convient d'annexer une copie, voire une photocopie, de l'étiquette. Nous recherchons des références ou des exemplaires de cartes distributives, publiées ou inédites. La banque de données sur les cartes distributives et sur les plantes rares est à la disposition de tous les intéressés. Cependant, dans certains cas, nous ne révélons pas l'emplacement exact des plantes rares, soit pour nous conformer au désir de l'informateur, soit pour protéger les populations concernées. Enfin, les cartes distributives inédites ne sauraient être communiquées sans la permission du compilateur.

Les observations et les demandes de renseignements doivent être envoyées à l'adresse indiquée à la page 3.

F. Liste des plantes rares de l'Alberta

Dans le cadre du projet du Musée national, la liste des plantes vasculaires rares de l'Alberta est unique en son genre en ce que nous avons eu accès à quelques-unes des nombreuses cartes distributives inédites compilées au fil des ans par le personnel de l'Herbier de l'Université de l'Alberta. Nous avons également pu examiner des spécimens de presque toutes les plantes figurant dans quatre herbiers contennant d'imposantes collections de la flore albertaine: celui de l'Université de l'Alberta (ALTA), celui de l'Université de Calgary (UAC), celui du ministère de l'Agriculture (DAO) et l'Herbier national du Canada (CAN). La mention de ces herbiers dans les références indique que nous y avons vu un spécimen ou la photographie d'un spécimen. Même si nous n'avons pas pu vérifier l'identification de tous les spécimens, nous nous sommes assurés qu'il n'y avait pas erreur évidente. De plus, comme il se peut que certaines cartes distributives inédites soient basées sur des erreurs d'identification, nous avons examiné toutes les anomalies apparentes des patterns de répartition.

Les cartes distributives inédites que nous avons pu voir dans la collection de l'Herbier de l'Université de l'Alberta, cartes citées dans la présente liste, étaient incomplètes et n'avaient pas été vérifiées. Quand paraîtra la version révisée de *Moss' Flora of Alberta* (à laquelle travaille de Dr John Packer), l'ensemble des plantes vasculaires de l'Alberta se trouvera cartographié et l'identification des spécimens vérifiée. Nous aurons alors un bon point de départ pour la révision de la présente liste.

L'information donnée dans la liste relativement à la répartition est basée sur diverses sources dont Boivin 1967 et 1967-72, Breitung 1957 et 1959, Fernald 1950, Hitchcock et al. 1955-69, Moss 1959, Mulligan 1976, ainsi que des cartes distributives et parfois d'autres sources. L'information relative à l'habitat est tirée en grande partie de Moss 1959 et de Taylor 1970.

En appliquant notre définition du mot *rare* à la flore de l'Alberta, nous avons dû porter quelques jugements arbitraires, en particulier lorsqu'il s'est agi de préciser ce qui constituait une *aire géographique réduite*. En général, nous nous en sommes tenus à la définition: par exemple, nous aurions admis une aire de la grandeur du parc national de Jasper ou du parc national de Banff, mais pas des deux ensemble à moins que les spécimens n'aient indiqué que la plante se retrouvait en plusieurs endroits éparpillés dans la région.

Nous avons eu quelque difficulté à apprécier la rareté de certaines plantes rencontrées dans les plaines arides au sud d'une ligne imaginaire allant de Lethbridge à Medicine Hat. Quelques-unes des plantes énumérées se retrouvent dans une région relativement vaste, mais nous les avons retenues parce que la plupart des spécimens examinés remontaient à plus de 75 ans. Seule une vérification sur place permettrait d'évaluer l'état actuel des populations d'un grand nombre de plantes de cette région.

Il y a dans le coin sud-ouest de la province nombre de plantes qui sont très abondantes dans la petite aire géographique qu'elles occupent. Nous l'avons alors indiqué *(abondantes par endroits)* dans la description de la répartition en Alberta. Bien que la plupart de ces plantes ne soient par vraisemblablement menacées d'extinction, elles entrent dans la catégorie des plantes rares et nous ne pouvions pas les laisser de côté.

Enfin, il n'est pas facile d'apprécier la rareté des plantes de la forêt boréale étant donné la sporadicité des cueillettes faites dans cette région. Certaines aires comme les collines Swan ou le lac Athabasca semblent avoir une flore unique en son genre. Toutefois, la flore de la région boréale est si peu connue que la sporadicité des cueillettes peut nous laisser croire à tort qu'il s'agit de populations différentes. Il se peut également — et c'est probablement le cas — que l'unicité des habitats et des flores de cette région nous échappe.

G. La protection des plantes rares en Alberta

L'Alberta a été à l'avant-garde du mouvement de sauvegarde de la Nature au Canada. Le nombre des organismes de protection et les initiatives gouvernementales en vue de préserver certaines régions naturelles indiquent bien le profond intérêt que suscite l'environnement.

Bien qu'il n'existe aucune loi provinciale pour la protection des plantes rare ou menacées d'extinction, plusieurs statuts en traitent indirectement par le biais de la protection des habitats (Argus 1977). En vertu de la Wilderness Areas Act de 1971, plusieurs régions sur le versant oriental des Montagnes Rocheuses se trouvent protégées et d'autres ont été proposées (Griffiths & Pharis 1976). L'Environmental Conservation Act de 1970 a créé une administration de la protection de l'environnement chargée de protéger les ressources naturelles, y compris la flore. En vertu de la Wilderness Areas Act, cette administration peut tenir des audiences publiques pour recevoir les propositions relatives à la protection d'autres régions naturelles.

La Provincial Parks Act de 1970 prévoit la classification des terres en régions naturelles ou régions sauvages afin que les habitats et les flores uniques en leur genre puissent faire l'objet d'une protection spéciale. Le ministère des Loisirs, des Parcs et de la Nature a dressé une liste préliminaire de la flore et de la faune rares de l'Alberta (Wallis 1977) afin de faciliter la planification des parcs. Incidemment, cette liste est basée en partie sur une version préliminaire de la présente liste et un grand nombre d'inscriptions ont été ajoutées ou radiées depuis qu'on l'a fait circuler. La Public Lands Act de 1970 prévoit également la désignation de régions naturelles et quelque 288 régions de ce genre sont devenues des réserves temporaires.

La législation relative à la protection des régions naturelles est administrée par plusieurs ministères dont le ministère des Loisirs, des Parcs et de la Nature, le ministère de l'Environnement et le ministère de l'Énergie et des Ressources naturelles. Bien que cette législation témoigne de l'importance que le gouvernement attache à l'utilisation judicieuse des ressources naturelles, cette répartition des responsabilités entre divers ministères ne peut que nuire à l'efficacité de la législation et la situation devrait être rectifiée.

Les groupements actifs de citoyens jouent en grade rôle dans l'adoption et l'application d'une législation protectrice, et l'Alberta compte un bon nombre de groupements de ce genre. L'Alberta Wilderness Association a préconisé une législation pour la protection des loisirs de plein air aussi bien que des régions écologiques et des lieux sauvages particuliers. Elle a publié trois études qui ont été intégrées à une présentation faite au gouvernement provincial concernant l'utilisation des terres sur le versant oriental des Montagnes Rocheuses. une quatrième étude sur la partie ouest des collines Swan (Griffiths & Pharis 1976) porte sur une zone unique en son genre dans la forêt boréale. Elle a été effectuée de concert avec la division d'Edmonton de l'Association des Parcs nationaux et provinciaux du Canada. Pour sa part la Calgary Field Naturalists' Society a réussi, par l'intermédiaire de son comité des régions naturelles, à se documenter sur les régions naturelles à l'intérieur

même de Calgary et à convaincre le gouvernement municipal de la nécessité de préserver ces régions autant que possible (Sherrington 1975).

Le Programme biologique international de la conservation des milieux biologiques terrestres (IBP-CT) a reçu une impulsion remarquable de certains membres du personnel de l'Université de l'Alberta (Fuller 1973). Ce programme joue un rôle important dans la protection des plantes rares puisque l'un de ses critères pour la sélection des réserves écologiques est justement la présence d'espèces rares ou menancées d'extinction ou intéressantes à d'autres titres. Depuis la fin du programme IBP-CT en 1974, une partie des études menées en Alberta a été assumée par l'Alberta Ecological Survey et financée par le gouvernement provincial.

En Alberta, les réseaux de parcs nationaux et provinciaux jouent également un rôle important dans la protection de certaines plantes rares. Quelques-unes des aires les plus précaires se trouvent dans des parcs nationaux comme ceux des lacs Waterton, de Banff et de Jasper, et dans des parcs provinciaux comme ceux de Writing-on-Stone et des collines Cyprès.

H. Modes de répartition des plantes rares en Alberta

Il y a en Alberta peu de plantes rares qui soient l'apanage de la province et celles qui sont considérées comme endémiques, comme *Carex athabascensis* et *Draba kananaskis*, font partie de groupes difficiles à classer de façon sûre. La plupart des plantes rares se rencontrent également ailleurs et elles forment dans la province des populations à la limite de leur aire géographique ou des groupes isolés. Nous ne disposons d'aucune carte montrant l'aire totale des plantes énumérées, mais une analyse des cartes existantes montre qu'elles peuvent être regroupées en plusieurs catégories selon leurs affinités floristiques.

L'un des groupes les plus remarquables est formé par les plantes de la cordillère des Etats-Unis qui s'avancent jusque dans le coin sud-ouest de la province. Quelques-unes d'entre elles qui, en Alberta, ne dépassent pas le parc national des lacs Waterton, sont mentionnées à cause de leur aire totale réduite *(Stellaria americana* s'étend jusque dans le centre-sud du Montana et *Prenanthes sagittata* s'étend dans le nord e l'Idaho et du Montana). Les plantes qui sont également rares dans toute leur aire aux Etats-Unis sont encore plus importantes. C'est le cas de *Douglasia montana, Gayophytum racemosum* et *Townsendia condensata*. L'exemple le plus typique de cette catégorie est *Aquilegia jonesii* qui s'étend au sud, dans le nord-ouest du Wyoming, et figure sur la liste des plantes menacées aux Etats-Unis (Smithsonian Institution 1975). Toutefois, la plupart des plantes de ce groupe ont une aire plus vaste et sont plus abondantes. Ces plantes, y compris les suivantes, sont énumérées ici à cause du peu d'importance de leur aire en Alberta: *Adenocaulon bicolor, Adiantum pedatum* var. *aleuticum, Arenaria nuttallii, Calochortus apiculatus, Hydrophyllum capitatum, Lewisia pygmaea, Mimulus lewisii, Nemophila breviflora* et *Taxus brevifolia*.

Un deuxième groupe important est celui des plantes qui s'étendent depuis la côte du Pacifique jusqu'à la cordillère de l'Alberta à l'est. Nombre d'entre elles se rencontrent dans les parcs nationaux de Banff et de Jasper, comme *Crataegus douglasii, Cypripedium montanum, Geranium erianthum, Luetkea pectinata, Lupinus nootkatensis, Montia parviflora, Osmorhiza purpurea* et *Thuja plicata*. *Crataegus douglasii* se rencontre également en groupes isolés dans l'est de l'Amérique du Nord et elle figure sur la Liste des plantes vasculaires rares de l'Ontario.

Un grand nombre de plantes typiques de l'arctique et des régions boréales descendent jusqu'en Alberta. Certaines, comme *Dryopteris fragrans, Gentianella detonsa* ssp. *raupii* et *Potentilla yukonensis* se retrouvent tout à fait au nord de la province, dans la forêt boréale. D'autres, comme *Arenaria humifusa, Carex glacialis, Draba fladnizensis* et *Pedicularis kanei* descendent le long de la cordillère sous forme de populations plus ou moins continues, tandis que d'autres encore, comme *Carex misandra, Eriophorum callitrix, Erysimum pallasii* apparaissent en groupes isolés dans la cordillère de l'Alberta. Certaines plantes, comme *Pedicularis flammea*, se retrouvent en populations distinctes dans l'Est et sont rares en Ontario.

Quelques plantes dont l'aire principale se trouve dans la partie orientale de la forêt boréale s'étendent à travers le Canada, jusque dans le nord-est de l'Alberta. C'est le cas, par exemple, de *Cypripedium acaule, Sagina nodosa, Sarracenia purpurea* et Utricularia cornuta. *En général, ces plantes forment des populations étroitement délimitées et elles se font plus rares en allant vers la limite occidentale de leur aire.*

Le long de la frontière méridionale de la province, on trouve de nombreuses plantes typiques des Grandes Plaines qui croissent dans la prairie aride. *Asclepias viridiflora, Astragalus kentrophyta, A. lotiflorus, Atriplex powellii, Eriogonum cernuum* et *Phlox alyssifolia* en sont quelques exemples.

Dans ce groupe, certaines plantes ont des aires réduites à l'extérieur de l'Alberta. *Oxytropis lagopus* var. *conjugans*, qui occupe les bad-lands autour de Cardston, dans le sud-ouest de la Province, se rencontre ailleurs seulement dans l'Etat voisin qui est le

Montana. *Oenthera caespitosa* var. *psammophila* se retrouve dans l'Idaho et elle est considérée comme une espèce menacée d'extinction aux Etats-Unis (United States 1976).

Sur ces patterns floristiques se superposent des modes de distribution produits par les tolérances de certaines plantes vis-à-vis de l'Habitat. Nous ne sommes pas en mesure d'analyser à fond ces modes de distribution, mais il est évident que la rarete de certaines plantes s'explique par la rareté des habitats qui leur conviennent. C'est le cas de l'espèce marécageuse *Utricularia cornuta* et des plantes de dunes actives *Elymus mollis, Salix tyrrellii* et *Tanacetum huronense* var. *bifarium*; des plantes de haute montagne *Antennaria alpina* var. *media* et *Papaver pygmaeum*; de *Boisduvalia glabella* qui pousse dans les plages de vase séchée des prairies; des plantes des collines calcaires *Cheilanthes feei, Pellaea atropurpurea* et *Woodsia glabella*, et de celles qui poussent sur les collines en altitude, comme *Adiantum pedatum* var. *aleuticum*; des plantes de sources chaudes *Panicum occidentale* et de celles des plages de caillasse, comme *Carex athabascensis*.

Lorsqu'on disposera de cartes distributives pour toutes les plantes rares de l'Alberta, on pourra discerner le centre principal des populations de plantes rares. Toutefois, même un examen superficiel permet d'établir qu'il existe des centres de plantes rares dans le coin sud-ouest de la province, dans les prairies arides le long de la frontière méridionale, dans la cordillère, dans le coin nord-est et dans certaines autres zones de la forêt boréale. Seules des études plus approfondies permettraient d'apprécier l'importance de ces centres et d'établir une corrélation systématique avec les parcs, les régions naturelles et les réserves écologiques, ainsi qu'avec d'autres régions protégées, pour obtenir un aperçu de l'étendue du problème que posent les plantes rares de l'Alberta.

I. Remerciements

Nous désirons remercier les personnes suivantes qui ont contribué à l'élaboration de la présente liste: C.D. Bird, Université de Calgary; W.G. Dore, Agriculture Canada; J.M. Gillett, Musée des Sciences naturelles; E. Haber, Musée des Sciences natureles; B. Hallworth, Université de Calgary; L. Kershaw, Université de l'Alberta; J.K. Morton, Université de Waterloo; G.A. Mulligan, Agriculture Canada; G. Pegg, Glenevis, Alberta; G.W. Scotter, Canadian Wildlife Service, Edmonton; C. Wallis, ministère albertain des Loisirs, des Parcs et de la Nature, division des parcs provinciaux, Edmonton; et J.F. Weir, ministère de l'agriculture du Manitoba, section de l'horticulture, Winnipeg. Nous désirons aussi remercier tout particulièrement le Dr John Packer, qui a mis à notre disposition les collections de l'Herbier de l'Université de l'Alberta, ainsi que certaines cartes distributives inédites, et Mlle Madeleine Dumais qui a manifesté un vif intérêt pour le projet et qui nous a fourni des cartes distributives annotées, basées sur la collection de cartes de l'Herbier de l'Université de l'Alberta.

ADDENDUM

Le symbole "†" indique qu'il y a une carte distributive des Grandes Plaines des Etats-Unis pour la plante dans McGregor & Barkley (1977)

LISTE DES PLANTES VASCULAIRES RARES DE L'ALBERTA

Abronia micrantha Torr.
SOURCES: CAN, DAO; Boivin 1967, Boivin 1967–72, Kershaw 1976, Packer & Dumais 1972 et carte
REPARTITION: sAlta; eMont–Nev–NM–DS
ALBERTA: Milk River
CARTE: Booth & Wright 1959 Montana, Johnson & Hallworth 1965 sAlta
HABITAT: Sables alluvionnaires meubles.
CONDITIONS: Rare au Canada.

Adenocaulon bicolor Hook.
SOURCES: ALTA, CAN, UAC; Boivin 1967–72, Moss 1959, Ogilvie 1962, Packer 1975–77 et carte
REPARTITION: sCB–soAlta, Ont; Cal–noMont, nMinn–nMich
ALBERTA: Abondante par endroits dans le parc nat. des lacs Waterton
CARTE: Fernald 1935
HABITAT: Bosquets et bois humides.
CONDITIONS: Rare en Ontario.

Adiantum pedatum L. var. **aleuticum** Rupr.
SOURCES: ALTA, DAO; Boivin 1967–72, Moss 1959, Ogilvie 1962 et carte
REPARTITION: Alas, CB–soAlta, Qué, TN; Cal & Wyo, Utah, Okla, dispersé dans l'est
ALBERTA: Parc national des lacs Waterton
CARTE: Hultén 1968, Taylor 1970 Pacifique NO
HABITAT: Sur les falaises et parmi les galets en altitude.
CONDITIONS: Rare dans le Wyoming et le Colorado.

Agoseris grandiflora (Nutt.) Greene
SOURCES: DAO; Packer & Dumais 1972
REPARTITION: soCB–ocAlta; Cal–clda
ALBERTA: Craigmyle
CARTE: Booth & Wright 1959 Montana
HABITAT: Plaines basses.

Agropyron scribneri Vasey
SOURCES: ALTA, DAO, UAC; Kershaw 1976, Packer 1975–77
REPARTITION: sCB–oAlta; Cal–NM
ALBERTA: Parc national des lacs Waterton et Kananaskis
HABITAT: Pentes alpines arides.
CONDITIONS: Rare dans l'Idaho et la Californie.

Agropyron violaceum (Hornem.) Lange ssp. **andinum** (Scribn. & Sm.) Melderis
SOURCES: CAN; Packer & Dumais 1972, Porsild 1959 et carte
REPARTITION: Alas–Y, CB–oAlta–soSask; Mont, dispersée dans le sud des montagnes Rocheuses
ALBERTA: Parc national de Banff
CARTE: Hultén 1968
HABITAT: Montagnes.

Agrostis borealis Hartm.
SOURCES: CAN; Packer 1975–77 et carte
REPARTITION: Alas–TNO, oAlta–Man, Qué, TN–Lab; Wash–Utah–Colo–CN
ALBERTA: Parc national de Jasper (mont Edith Cavell)
CARTE: Hitchcock & Chase 1950 E–U, Porsild 1964 Can, Raup 1930 Can
HABITAT: Pentes et talus en altitude.
CONDITIONS: Menacées d'extinction dans la Caroline du Nord et rare dans le Wyoming.

Agrostis humilis Vasey
SOURCES: CAN, DAO; Kershaw 1976, Packer & Dumais 1972, Porsild 1959
REPARTITION: CB–soAlta; Nev–Colo
ALBERTA: Parc national de Jasper (mont Edith Cavell) et parc national de Banff
CARTE: Hitchcock & Chase 1950 E–U
HABITAT: Prairies subalpines et alpines, rives des cours d'eau et pentes humides.

Allium geyeri Wats.
SOURCES: ALTA, CAN, DAO; Moss 1959, Ogilvie 1962 et cartes
REPARTITION: CB–soAlta–Sask; Ariz–Tex–nDS
ALBERTA: Parc national des lacs Waterton, Calgary et Beaverlodge
CARTE: Ownbey and Aase 1955, Univ. of Alta 1975
HABITAT: Prairies humides et rives des cours d'eau.
CONDITIONS: Rare dans l'Orégon.

Ambrosia acanthicarpa Hook.
(*Franseria acanthicarpa* (Hook.) Cov.)
SOURCES: ALTA, CAN, DAO; Kershaw 1976
REPARTITION: seAlta–soMan; Wash–Cal–Tex (introduite dans l'est)
ALBERTA: Milk River et Manyberries
CARTE: Booth & Wright 1959 Montana . †
HABITAT: Dunes.

Androsace occidentalis Pursh
SOURCES: DAO; Wallis 1977
REPARTITION: CB–sAlta–oOnt; oMont–sCal–NM–Vallée du Mississippi
ALBERTA: Lacombe
CARTE: †
HABITAT: Dry, usually sandy ground
CONDITIONS: Menacées d'extinction dan l'Indiana et rare dans l'Iowa.

Anemone nemorosa L. var. **bifolia** (Farwell) Boivin
(*A. quinquefolia* L. var. *interior* Fern.)
SOURCES: ALTA, DAO; Kershaw 1976 et carte
REPARTITION: oAlta–oQué; Grands Lacs–Ky
ALBERTA: Nordegg
CARTE: Univ. of Alta 1975
HABITAT: Bois.
CONDITIONS: Rare en Saskatchewan.

Anemone quinquefolia var. **interior** = **A. nemorosa** var. **bifolia**

Angelica dawsonii Wats.
SOURCES: CAN, DAO; Kershaw 1976, Ogilvie 1962
REPARTITION: seCB–soAlta; Ida–noMont
ALBERTA: Parc national des lacs Waterton (abondante par endroits), réserve de Crowsnest Forest et Blairmore
HABITAT: Prairies et bois humides le long des cours d'eau.

Antennaria acuta Rydb.
SOURCES: CAN, DAO; Boivin 1967
REPARTITION: CB–oAlta
ALBERTA: Parc national de Banff

Antennaria alpina (L.) Gaertn. var. **media** (Greene) Jeps. (*A. media* Greene)
SOURCES: CAN, DAO; Boivin 1967–72 et carte
REPARTITION: TNO, soAlta, nQué, Lab; Cal–Colo
ALBERTA: Parc national de Banff (abondante par endroits) et parc national de Jasper
CARTE: Hultén 1968
HABITAT: En altitude dans les montagnes.

Antennaria angustata Greene
(*A. monocephala* DC. ssp. *angustata* (Greene) Hult.)
SOURCES: ALTA, CAN, DAO; Kershaw 1976, Packer & Dumais 1972 et cartes
REPARTITION: Alas–TNO, seCB–oAlta, Qué–Lab
ALBERTA: Parcs nationaux de Banff et de Jasper
CARTE: Hultén 1968, Porsild 1964, Porsild 1965
HABITAT: Endroits graveleux ou rocheux, mais non calcaires.

Antennaria corymbosa E. Nels.
SOURCES: ALTA, DAO
REPARTITION: seAlta–soSask; Utah–Colo
ALBERTA: Parc provincial des collines Cyprès.
HABITAT: Bois clairs.

Antennaria luzuloides T. & G.
SOURCES: ALTA, DAO, UAC; Boivin 1967–72, Ogilvie 1962 et carte
REPARTITION: sCB–oAlta; nCal–nColo
ALBERTA: Parcs nationaux de Banff et des lacs Waterton
CARTE: Booth & Wright 1959 Montana, Univ. of Alta 1975
HABITAT: Clairières dans les montagnes.

Antennaria media = A. alpina var. **media**

Antennaria monocephala ssp. **angustata = A. angustata**

Antennaria monocephala DC. ssp. **monocephala**
SOURCES: DAO; Packer & Dumais 1972 et carte
REPARTITION: Alas–TNO, eCB–soAlta, oOnt
ALBERTA: Parcs nationaux de Banff et de Jasper et parc provincial de Willmore Wilderness
CARTE: Hultén 1968, Porsild 1950, Raup 1947

Aquilegia jonesii Parry
SOURCES: ALTA, CAN, DAO; Kershaw 1976, Ogilvie 1962, Packer 1975–77 et carte
REPARTITION: soAlta; noWyo
ALBERTA: Parc national des lacs Waterton
CARTE: Booth & Wright 1959 Montana, Univ. of Alta 1975
HABITAT: En altitude dans les lieux alpins rocheux.
CONDITIONS: Rare au Canada. Menacées aux Etats–Unis (Smithsonian Institution 1975), rare dans le Montana et le Wyoming.

Arenaria humifusa Wahl.
SOURCES: CAN; Packer & Dumais 1972, Porsild 1959 et cartes
REPARTITION: Alas–TNO, CB–oAlta, nMan–Qué, TN–Lab
ALBERTA: Parcs nationaux de Banff et de Jasper
CARTE: Hultén 1958, Hultén 1968, Porsild 1964, Raup 1947, Raymond 1950
HABITAT: Corniches, alpine graveleuses.
CONDITIONS: Rare en Ontario.

Arenaria nuttallii Pax
SOURCES: ALTA, CAN; Kershaw 1976, Ogilvie 1962 et carte
REPARTITION: CB–soAlta; Cal–Wyo
ALBERTA: Parc national des lacs Waterton (abondante par endroits) jusqu'à Crowsnest Pass
CARTE: Booth & Wright 1959 Montana, Univ. of Alta 1975
HABITAT: Crêtes alpines arides.

Aristida longiseta Steudel var. **robusta** Merr.
SOURCES: ALTA, CAN, DAO; Moss 1959
REPARTITION: sCB–seAlta–sMan; Ariz–Tex–Iowa
ALBERTA: St. Kilda et Lethbridge
CARTE: Hitchcock & Chase 1950 E–U . †
HABITAT: Plaines arides.
CONDITIONS: Rare en Saskatchewan. Rare dans l'Iowa.

Arnica alpina (L.) Olin ssp. **angustifolia** (M. Vahl) Maguire
SOURCES: CAN; Moss 1959, Porsild 1959 et cartes
REPARTITION: Alas–TNO, CB–soAlta, nSask–Man, nOnt, Qué
ALBERTA: Parc national de Banff (abondante par endroits) et parc national de Jasper
CARTE: Hultén 1958, Hultén 1968, Maguire 1943, Porsild 1964
HABITAT: Lieux alpins.
CONDITIONS: Rare en Ontario.

Arnica parryi Gray
SOURCES: ALTA, CAN, DAO, UAC; et cartes
REPARTITION: sCB–oAlta; Cal–Colo
ALBERTA: Parc national de Banff (abondante par endroits) et parc national des lacs Waterton
CARTE: Hultén 1968, Maguire 1943, Univ. of Alta 1975
HABITAT: Bois clairs.

Artemisia borealis = A. campestris ssp. **borealis**

Artemisia campestris L. ssp. **borealis** (Pall.) Hall & Clements
(*A. borealis* Pall.)
SOURCES: ALTA, CAN, UAC; Packer & Dumais 1972, Weir 1974 et cartes
REPARTITION: Alas-TNO, CB-o&neAlta-noSask, nOnt-Qué, TN-Lab; nWash-nMont
ALBERTA: Parc national des lacs Waterton, Mountain Park, mont Plateau et rivière Maybelle
CARTE: Hultén 1968, Porsild 1964
HABITAT: Plaines, collines, pentes en montagne et dunes actives.

Artemisia tridentata Nutt.
SOURCES: ALTA, UAC; Moss 1959, Ogilvie 1962 et cartes
REPARTITION: sCB-soAlta; sCal-NM-DN
ALBERTA: Parc national des lacs Waterton jusqu'à Crowsnest
CARTE: Beetle 1960 E-U, Daubenmire 1942 E-U, Little 1976, Ward 1953
HABITAT: Pentes couvertes de prairie arides.

Asclepias viridiflora Raf.
SOURCES: ALTA, DAO, UAC; Moss 1959
REPARTITION: sCB-seAlta-Ont; Ariz-Tex-Ge-NY
ALBERTA: Parc provincial Writing-on-Stone jusqu'à Milk River (abondante par endroits)
CARTE: Booth & Wright 1959 Montana, Woodson 1954
HABITAT: Prairie arides sur le flanc des collines.
CONDITIONS: Rare en Ontario.

Aster maccallae Rydb.
SOURCES: DAO; Packer & Dumais 1972, Porsild 1959
REPARTITION: seCB-soAlta
ALBERTA: Parcs nationaux de Banff et de Jasper et Crowsnest
HABITAT: Près des torrents de montagne.

Aster pauciflorus Nutt.
SOURCES: ALTA, CAN, DAO; et carte
REPARTITION: TNO, eAlta-Man; Ariz-Tex
ALBERTA: Medicine Hat, Oyen et lac Heart
CARTE: Univ. of Alta 1975, †
HABITAT: Sol salin.

Aster tanacetifolius = Machaeranthera tanacetifolia

Astragalus kentrophyta Gray
SOURCES: ALTA, CAN, DAO, UAC; Kershaw 1976 et cartes
REPARTITION: sAlta-soSask; oOré-Cal-NM-Mont
ALBERTA: Parc provincial Writing-on-Stone, Belly River et Medicine Hat
CARTE: Barneby 1964, Univ. of Alta 1975, †
HABITAT: Talus et pentes érodés.
CONDITIONS: Rare au Canada.

Astragalus lotiflorus Hook.
SOURCES: ALTA, CAN, DAO; Moss 1959 et carte
REPARTITION: CB-sAlta-soMan; Mont-Tex-Mo-Minn
ALBERTA: Turin, Medicine Hat et Milk River
CARTE: Barneby 1964, Welsh 1960, †
HABITAT: Pentes et prairies arides.
CONDITIONS: Rare dans l'Iowa et le Missouri.

Astragalus purshii Dougl. var. **purshii**
SOURCES: ALTA, CAN, DAO; et cartes
REPARTITION: sCB-sAlta-sSask; Cal-Colo-DN
ALBERTA: Manyberries et Medicine Hat
CARTE: Barneby 1964, Univ. of Alta 1975, †
HABITAT: Flancs de collines et plaines arides.
CONDITIONS: Rare en Saskatchewan.

Athyrium alpestre = A. distentifolium ssp. **americanum**

Athyrium distentifolium Taush. ssp. **americanum** (Butters) Hult.
(*A. alpestre* (Hoppe) Rylands)
SOURCES: ALTA, CAN, UAC; Moss 1959 et carte
REPARTITION: Alas, CB-oAlta, seQué, TN; Cal-Colo
ALBERTA: Parc national de Jasper (mont Edith Cavell) et parc national des lacs Waterton
CARTE: Hultén 1968, Taylor 1970 Pacifique NO
HABITAT: Endroits rocheux et prairies alpines humides.
CONDITIONS: Rare dans le Colorado.

Atriplex aptera A. Nels.
(*A. canescens* (Pursh) Nutt. var. *aptera* (A. Nels.) C. L. Hitchc.)
SOURCES: DAO; Kershaw 1976
REPARTITION: sAlta; ecMont
ALBERTA: Onefour, East Coulee et Verdigris Coulee
HABITAT: Sols salins.
CONDITIONS: Rare au Canada.

Atriplex canescens var. **aptera = A. aptera**

Atriplex powellii Wats.
SOURCES: ALTA; Kershaw 1976, Packer 1975-77 et carte
REPARTITION: sAlta-sSask; Oré-Ariz-DS
ALBERTA: Rosedale
CARTE: Frankton & Bassett 1970
HABITAT: Bad-lands.

Atriplex truncata (Torr.) Gray
SOURCES: ALTA, DAO; Packer 1975-77 et carte
REPARTITION: CB-seAlta-sSask; Cal-Colo, Mo
ALBERTA: Parc provincial des collines Cyprès (abondante par endroits) jusqu'à Wild Horse
CARTE: Frankton & Bassett 1970
HABITAT: Sol alcalin.

Bahia oppositifolia (Nutt.) Rydb.
SOURCES: Boivin 1967-72
REPARTITION: sAlta-soSask
ALBERTA: Lethbridge
CARTE: Ellison 1964 E-U
HABITAT: Sol alcalin.
CONDITIONS: Rare en Saskatchewan.

Balsamorhiza sagittata (Pursh) Nutt.
SOURCES: ALTA, CAN, DAO, UAC; Ogilvie 1962 et carte
REPARTITION: sCB–soAlta; sCal–Colo–Black Hills, SD
ALBERTA: Parc national des lacs Waterton (abondante par endroits), Cardston et Coleman
CARTE: Helton et al. 1972
HABITAT: Prairies herbeuses et bois clairs.
CONDITIONS: Rare dans les collines Sweetgrass, Montana.

Boisduvalia glabella (Nutt.) Walpers
SOURCES: ALTA, CAN, DAO; Boivin 1967–72, Kershaw 1976 et carte
REPARTITION: CB–eAlta–soSask; Cal–Utah–DN–DS
ALBERTA: Parc provincial des collines Cyprès, Medicine Hat et Empress
CARTE: Raven & Moore 1965
HABITAT: Plages de vase séchée dans la prairie.

Botrychium boreale (Fries) Milde
SOURCES: ALTA, CAN, DAO; Packer & Dumais 1972, Porsild 1959 et cartes
REPARTITION: Alas–Y, CB–soAlta; neOré, neNev, Colo
ALBERTA: Parc national de Banff, forêt nationale Brazeau, parc provincial de Willmore Wilderness et Cadomin
CARTE: Clausen 1938, Hultén 1968, Taylor 1970 Pacifique NO
HABITAT: Endroits herbeux dégagés, prairies alpines et sol tourbeux.
CONDITIONS: Rare dans le Colorado et l'Orégon, peu commune dans l'Etat de Washington.

Botrychium lanceolatum (Gmelin) Rupr. var. **lanceolatum**
SOURCES: CAN, DAO; Porsild 1959 et cartes
REPARTITION: Alas–Y, CB–oAlta–soSask, Qué–NE, Lab; Oré, Utah, Wyo–Colo
ALBERTA: Parc national de Banff
CARTE: Clausen 1938, Hultén 1968, Porsild 1966 Can, Taylor 1970 Pacifique NO
HABITAT: Pentes tourbeuses, endroits sablonneux dégagés, prairies alpines et bois clairs.
CONDITIONS: Rare en Ontario et en Nouvelle–Ecosse. Rare dans l'Etat de Washington, l'Orégon, le Utah et le Wyoming.

Braya purpurascens (R. Br.) Bunge
SOURCES: ALTA, CAN; Kershaw 1976, Packer & Dumais 1972, Weir 1974 et cartes
REPARTITION: Alas–TNO,oAlta, Qué, Lab
ALBERTA: Parc provincial de Willmore Wilderness jusqu'à Cadomin
CARTE: Hultén 1968, Hultén 1971, Packer & Vitt 1974, Porsild 1964
HABITAT: Argile calcaire et landes graveleuses.

Brickellia grandiflora (Hook.) Nutt.
SOURCES: ALTA, CAN, DAO, UAC; Kershaw 1976, Ogilvie 1962
REPARTITION: soAlta; Cal–NM, Neb–Ark–Mo
ALBERTA: Abondantes par endroits dans le parc national des lacs Waterton
CARTE: Booth & Wright 1959 Montana, †
HABITAT: Pentes érodées et talus rocheux dans les montagnes.
CONDITIONS: Rare au Canada.

Bromus purgans L.
SOURCES: CAN, DAO; Moss 1959, Packer 1975–77 et carte
REPARTITION: TNO, c&oAlta–NB; Wyo–Ark–Ve
ALBERTA: Parcs nationaux de Banff et des lacs Waterton et Edmonton
CARTE: Hitchcock & Chase 1950 E–U, Wagnon 1952
HABITAT: Bosquets et bois humides.
CONDITIONS: Rare dans le Wyoming.

Bupleurum americanum C. & R.
(*B. triradiatum* Adams ssp. *arcticum* (Regel) Hult.)
SOURCES: ALTA, CAN, DAO; Packer 1975–77 et cartes
REPARTITION: Alas–TNO, seCB–soAlta; elda–ocWyo
ALBERTA: Parc national des lacs Waterton (abondante par endroits) jusqu'à Cardston
CARTE: Booth & Wright 1959 Montana, Hultén 1968, Porter 1946 Wyoming, Univ. of Alta 1975
HABITAT: Flancs de collines et prairies arides.

Bupleurum triradiatum ssp. **arcticum = B. americanum**

Calamagrostis lapponica (Wahl.) Hartm. var. **nearctica** Pors.
SOURCES: ALTA, CAN, DAO, UAC; Moss 1959 et cartes
REPARTITION: Alas–TNO, oAlta, Man–Qué
ALBERTA: Réserve de Clearwater Forest et Cadomin
CARTE: Hultén 1964a, Hultén 1968, Porsild 1964, Raup 1947, Young 1971

Calochortus apiculatus Baker
SOURCES: CAN, DAO, UAC; Kershaw 1976, Ogilvie 1962 et cartes
REPARTITION: CB–soAlta; neWash–noMont
ALBERTA: Parc national des lacs Waterton jusqu'à Crowsnest
CARTE: Ownbey 1940, Univ. of Alta 1975
HABITAT: Pentes arides.

Camissonia andina (Nutt.) Raven
(*Oenothera andina* Nutt.)
SOURCES: ALTA, DAO; Boivin 1967–72, Kershaw 1976, Moss 1959
REPARTITION: sCB–seAlta; Cal–Utah–Wyo
ALBERTA: Manyberries
CARTE: Munz 1946 Wyoming
HABITAT: Pentes, plages et dépressions arides dans la prairie.

Camissonia breviflora (T. & G.) Raven
(*Oenothera breviflora* T. & G.)
SOURCES: ALTA, CAN; Boivin 1967–72, Kershaw 1976, Moss 1959
REPARTITION: sCB–seAlta–soSask; nCal–Wyo
ALBERTA: Parc provincial des collines Cyprès, lac Handhills et Milk River
CARTE: Booth & Wright 1959 Montana, Munz 1946 Wyoming
HABITAT: Argillières.
CONDITIONS: Rare en Saskatchewan.

Cardamine parviflora L. var. **arenicola** (Britt.) O. E. Schulz
SOURCES: ALTA, DAO; Moss 1959
REPARTITION: sCB–noAlta, Ont–NE; Oré, Minn–Wis, Fle–Tex
CARTE: †
ALBERTA: Notikewin et lac Touchwood
HABITAT: Bois secs, corniches ombragées ou exposées et sols sablonneux.

Cardamine pratensis L. var. **palustris** Wimm. & Grab.
SOURCES: ALTA; Moss 1959
REPARTITION: TNO, CB–ncAlta–Qué, NE–Lab; Grands Lacs–Ve
ALBERTA: Hondo, autoroute McMurray et rivière Pembina
HABITAT: Marais et marécages.
CONDITIONS: Rare en Nouvelle–Ecosse. Menacées d'extinction dans l'Indiana, menacées dans le Wisconsin et rare dans l'Illinois.

Carex athabascensis F. J. Hermann
SOURCES: ALTA, UAC; Kershaw 1976, Moss 1959
REPARTITION: oAlta: endémique
ALBERTA: Parc national de Jasper et Sheep River
HABITAT: Rives de caillasse.
CONDITIONS: Rare au Canada.

Carex eleusinoides = C. eurystachya

Carex enanderi = C. eurystachya

Carex eurystachya F. J. Hermann
(*C. eleusinoides* Turcz., *C. enanderi* Hult.)
SOURCES: ALTA, CAN, DAO; Hudson 1972, Kershaw 1976, Moss 1959
REPARTITION: Alas–Y, oAlta
ALBERTA: Parc national de Jasper (mont Edith Cavell) et parc national de Banff
CARTE: Hultén 1968, Porsild 1966
HABITAT: Eaux de fusion argileuse et graveleuse dans les lacs de montagne.

Carex glacialis Mack.
SOURCES: DAO; Packer & Dumais 1972, Porsild 1959 et cartes
REPARTITION: Alas–TNO, CB–oAlta–Qué, TN–Lab
ALBERTA: Parc national de Banff
CARTE: Hudson 1977 Sask, Hultén 1964a, Hultén 1968, Porsild 1964
HABITAT: Sol calcaire aride.
CONDITIONS: Rare en Saskatchewan.

Carex gymnoclada Holm.
(*C. scopulorum* Holm.)
SOURCES: ALTA, CAN, DAO, UAC; Kershaw 1976, Moss 1959 et carte
REPARTITION: Y, sCB–oAlta; Cal–Colo
ALBERTA: Coleman, Highwood Pass et Mountain Park
CARTE: éHultén 1968
HABITAT: Terrain humide.

Carex illota Bailey
SOURCES: CAN, DAO; Kershaw 1976, Scotter & Hudson 1975
REPARTITION: sCB–oAlta; Cal–Colo
ALBERTA: Parcs nationaux de Banff, de Jasper et des lacs Waterton
HABITAT: Lieux humides dans les montagnes.

Carex maritima Gunn. var. **maritima**
SOURCES: ALTA; Kershaw 1976, Moss 1959
REPARTITION: Alas–TNO, CB, cAlta, Man–Qué, TN–Lab
ALBERTA: Edmonton
CARTE: Hudson 1977 Sask, Meusel et al. 1965, Porsild 1964
CONDITIONS: Rare en Saskatchewan.

Carex mertensii Pres.
SOURCES: ALTA, CAN, DAO; Moss 1959, Packer 1975–77 et carte
REPARTITION: Alas, CB–soAlta; nCal–oMont
ALBERTA: Mont North Kootenay jusqu'à la rivière Carbondale
CARTE: Hultén 1968
HABITAT: Talus et pentes dans les montagnes.

Carex misandra R.Br.
SOURCES: ALTA, CAN; Kershaw 1976, Packer & Dumais 1972 et cartes
REPARTITION: Alas–TNO, CB–oAlta, Qué, Lab; disj Colo, Utah
ALBERTA: Parc national de Jasper et mont Cheviot
CARTE: Hultén 1964a, Hultén 1968, Packer & Vitt 1974, Porsild 1964 Can, Young 1971
HABITAT: Prairies et pentes au dessus de la ligne des arbres.

Carex paysonis Clokey
SOURCES: ALTA, DAO; Kershaw 1976, Kuijt 1973
REPARTITION: soAlta; Nev–oWyo
ALBERTA: Parc national des lacs Waterton
HABITAT: Prairies humides et pentes rocheuses dans les montagnes.
CONDITIONS: Rare au Canada.

Carex petricosa Dew.
SOURCES: DAO; Wallis 1977 et cartes
REPARTITION: Alas–TNO, CB–oAlta
ALBERTA: Parc national de Jasper (glacier Athabasca)
CARTE: Hultén 1968, Porsild 1964
HABITAT: Pentes et sommets alpins.

Carex scopulorum = C. gymnoclada

Carex supina Willd. ssp. **spaniocarpa** (Steud.) Hult.
SOURCES: DAO; Packer & Dumais 1972
REPARTITION: Alas-TNO, CB-noAlta-Ont, Qué; Minn
ALBERTA: Peace River
CARTE: Hudson 1977 Sask, Hultén 1964a, Hultén 1968, Porsild 1964 Can
CONDITIONS: Rare en Saskatchewan et en Ontario.

Carex trisperma Dew.
SOURCES: ALTA, CAN, DAO; Moss 1959
REPARTITION: CB-cAlta-Lab; Grands Lacs-eE-U
ALBERTA: Parc national d'Elk Island, Fort Saskatchewan et collines Swan
CARTE: Hudson 1977 Sask
HABITAT: Marais et bois humides.
CONDITIONS: Rare en Saskatchewan. Menacées d'extinction dans la Caroline du Nord.

Castilleja cusickii Greenm.
SOURCES: CAN, DAO, UAC; Kershaw 1976
REPARTITION: sCB-soAlta; neOré-noWyo-oMont
ALBERTA: Parc national des lacs Waterton, Cardston et Calgary
HABITAT: Pentes en montagne et prairies couvertes de fétuques.

Castilleja pallescens (Gray) Greenm.
SOURCES: CAN; Kershaw 1976
REPARTITION: sCB-soAlta; nelda, Wyo-oMont
ALBERTA: Parc national des lacs Waterton et Calgary
CARTE: Booth & Wright 1959 Montana
HABITAT: Plaines et collines arides.

Ceanothus velutinus Dougl.
SOURCES: ALTA, CAN, DAO, UAC; Ogilvie 1962, Packer 1975-77 et carte
REPARTITION: CB-soAlta; Cal-Colo, DS
ALBERTA: Parc national des lacs Waterton et Crowsnest Pass
CARTE: Booth & Wright 1959 Montana, Porter 1944 Wyoming, Univ. of Alta 1975
HABITAT: Pentes en montagne.
CONDITIONS: Rare dans les collines Sweetgrass, Montana.

Centunculus minimus L.
SOURCES: ALTA, DAO; Boivin 1967-72 et carte
REPARTITION: sCB-eAlta-soSask, NE; répandu aux E-U
ALBERTA: Empress et Redcliff
CARTE: Booth & Wright 1959 Montana, Hultén 1958, Univ. of Alta 1975. †
HABITAT: Sol humide et boue sur le bord des étangs.
CONDITIONS: Rare en Nouvelle-Ecosse et en Saskatchewan.

Cheilanthes feei Moore
SOURCES: CAN, DAO, UAC; Kershaw 1976, Moss 1959
REPARTITION: CB-oAlta; Cal-Tex-Ill-Minn
ALBERTA: Parc national de Banff, parc provincial Entrance, Kananaskis et Cochrane
CARTE: Taylor 1970 Pacifique NO. †
HABITAT: Crevasses dans les falaises calcaires arides.
CONDITIONS: Menacées d'extinction dans le Minnesota et rare dans l'Orégon et l'Iowa.

Cheilanthes gracillima D. C. Eat.
SOURCES: Kuijt 1973
REPARTITION: sCB-soAlta; Cal-Mont
ALBERTA: Parc national des lacs Waterton
CARTE: Taylor 1970 Pacifique NO
HABITAT: Crevasses et corniches dans les falaises ignées.

Chrysanthemum bipinnatum ssp. **huronense** = **Tanacetum huronense**

Chrysothamnus nauseosus (Pall.) Britt.
SOURCES: DAO; Ogilvie 1962
REPARTITION: CB-soAlta-seSask; Cal-Tex
ALBERTA: Parc provincial des collines Cyprès et St. Kilda
CARTE: Booth & Wright 1959 Montana, Daubenmire 1942 E-U. †
HABITAT: Endroits arides dégagés.

Cirsium hookerianum var. **scariosum** = **C. scariosum**

Cirsium scariosum Nutt.
(*C. hookerianum* Nutt. var. *scariosum* (Nutt.) Boivin)
SOURCES: ALTA, CAN, DAO; et cartes
REPARTITION: seCB-soAlta, Qué; nNev-oWyo
ALBERTA: Parc national des lacs Waterton, Cardston et Crowsnest
CARTE: Moore & Frankton 1967, Moore & Frankton 1974 Can
HABITAT: Bois et endroits dégagés dans les collines basses et les montagne.

Claytonia linearis = **Montia linearis**

Claytonia parviflora = **Montia parviflora**

Conimitella williamsii (D. C. Eat.) Rydb.
SOURCES: ALTA, CAN, DAO, UAC; Kershaw 1976, Ogilvie 1962, Packer & Dumais 1972
REPARTITION: soAlta; elda-Colo-Mont
ALBERTA: Cardston jusqu'à Crowsnest
CARTE: Booth & Wright 1959 Montana
HABITAT: Crevasses du rocher, falaises humides et versants dégagés des montague.
CONDITIONS: Rare au Canada. Rare dans le Colorado et dans les collines Sweetgrass, Montana.

Crataegus douglasii Lindl.
SOURCES: ALTA, CAN, DAO, UAC; Ogilvie 1962 et cartes
REPARTITION: Alas, CB-sAlta-Sask, oOnt; Cal-NM-Mont, Minn-Mich
ALBERTA: Parc national des lacs Waterton et parc provincial des collines Cyprès
CARTE: Hultén 1968, Little 1976
HABITAT: Pentes, rives des cours d'eau et des lacs.
CONDITIONS: Rare en Saskatchewan et en Ontario. Menacées d'extinction dans le Minnesota, rare dans le Michigan.

Crepis atrabarba Heller
SOURCES: ALTA, CAN; Kershaw 1976, Ogilvie 1962 et carte
REPARTITION: sCB-oAlta-soSask; cNev-cColo
ALBERTA: Parcs nationaux de Banff et des lacs Waterton
CARTE: Booth & Wright 1959 Montana, Univ. of Alta 1975
HABITAT: Endroits arides et dégagés en montagne.
CONDITIONS: Rare en Saskatchewan.

Cryptantha affinis (Gray) Greene
SOURCES: CAN; Kershaw 1976
REPARTITION: sCB-soAlta; Cal-Wyo
ALBERTA: Parc national de Banff
CARTE: Booth & Wright 1959 Montana
HABITAT: Pentes dégagés ou légèrement boisées.

Cypripedium acaule Ait.
SOURCES: ALTA, CAN; et cartes
REPARTITION: TNO, neAlta-TN; Minn-Ala-Me
ALBERTA: Rivière Richardson et rive nord du lac Athabasca
CARTE: Luer 1975, Univ. of Alta 1975
HABITAT: Marais, bois et dunes.
CONDITIONS: Menacées d'extinction dans le Vermont, menacée dans l'Alabama et rare dans l'Illinois et le Rhode-Island.
PROTECTION: Un permis d'exportation est requis selon la Convention sur le commerce international des espèces de faune et de flore sauvages menacées d'extinction (Canada 1973, 1975) ratifiée par le Canada et les Etats-Unis. Protégée par la loi dans le Minnesota, le Wisconsin, le Vermont et l'Etat de New-York.

Cypripedium montanum Dougl.
SOURCES: ALTA, CAN, UAC; Kuijt 1973, Ogilvie 1962 et cartes
REPARTITION: Alas, CB-soAlta; Cal-Wyo
ALBERTA: Parc national des lacs Waterton
CARTE: Hultén 1968, Luer 1975, Univ. of Alta 1975
HABITAT: Bois humides.
CONDITIONS: Menacées dans l'Etat de Washington, rare dans l'Orégon.
PROTECTION: Un permis d'exportation est requis selon la Convention sur le commerce international des espèces de faune et de flore sauvages menacées d'extinction (Canada 1973, 1975) ratifiée par le Canada et les Etats-Unis.

Disporum hookeri var. **oreganum** = **D. oreganum**

Disporum oreganum Wats.
(*D. hookeri* (Torr.) Britt. var. *oreganum* (Wats.) Q. Jones)
SOURCES: ALTA, DAO; Ogilvie 1962 et cartes
REPARTITION: CB-soAlta; Oré-oMont
ALBERTA: Parc national des lacs Waterton (abondante par endroits) jusqu'à Castle River
CARTE: Jones 1951, Univ. of Alta 1975
HABITAT: Bois humides.

Douglasia montana Gray
SOURCES: DAO; Kershaw 1976, Ogilvie 1962, Packer 1975-77 et carte
REPARTITION: soAlta; Ida-nWyo
ALBERTA: Parc national des lacs Waterton
CARTE: Booth & Wright 1959 Montana, Univ. of Alta 1975
HABITAT: Endroits arides dans les collines basses et les montagnes.
CONDITIONS: Rare au Canada. Rare dans l'Idaho.

Downingia laeta Greene
SOURCES: ALTA, DAO; Boivin 1967-72, Kershaw 1976, Moss 1959 et carte
REPARTITION: scAlta-soSask; Cal-Utah-oMont
ALBERTA: Foremost et Medicine Hat
CARTE: McVaugh 1941
HABITAT: Boue et eau peu profonde.
CONDITIONS: Rare au Canada.

Draba densifolia Nutt.
(*D. stenopetala* auct.)
SOURCES: CAN, DAO; Mulligan 1975, Packer & Dumais 1972, Porsild 1959 et cartes
REPARTITION: Alas, CB-oAlta; Cal-oWyo
ALBERTA: Parc national de Banff jusqu'au parc national des lacs Waterton
CARTE: Hultén 1968, Porsild 1966 Can, Univ. of Alta 1975
HABITAT: Eboulis.

Draba fladnizensis Wulf.
(*D. lactea* auct.)
SOURCES: CAN, UAC; Kershaw 1976, Mulligan 1975 et cartes
REPARTITION: Alas-TNO, CB-oAlta, nMan, Qué, Lab; Mont-Colo-Utah
ALBERTA: Parc national de Banff et Mountain Park
CARTE: Hultén 1958, Hultén 1968, Mulligan 1974 Can, Porsild 1964 Can, Univ. of Alta 1975
HABITAT: Eboulis.
CONDITIONS: Rare dans le Colorado.

Draba glabella Pursh
(*D. hirta* auct.)
SOURCES: DAO; Mulligan 1975, Packer & Dumais 1972 et cartes
REPARTITION: Alas-TNO, CB-oAlta, Man-NB, NE-Lab; disj Wyo, Colo
ALBERTA: Parc national de Jasper (champ de glace Columbia)
CARTE: Hultén 1968, Mulligan 1970a Can, Porsild 1964 Can, Univ. of Alta 1975
HABITAT: Endroits rocheux et secs en montagne.
CONDITIONS: Rare en Ontario et en Nouvelle-Ecosse. Rare dans le Wyoming et le Colorado.

Draba hirta = **D. glabella**

Draba kananaskis G. A. Mulligan
SOURCES: DAO; Kershaw 1976, Mulligan 1970b, Packer & Dumais 1972, Weir 1974
REPARTITION: soAlta:endémique
ALBERTA: Chaîne Kananaskis
HABITAT: Pentes en montagne.
CONDITIONS: Rare au Canada.

Draba lactea = D. fladnizensis

Draba longipes Raup
SOURCES: CAN, UAC; et cartes
REPARTITION: Alas-TNO, CB-oAlta
ALBERTA: Parc national de Banff (vallée Snow Creek)
CARTE: Cody 1971, Hultén 1968, Mulligan 1970a, Raup 1947, Univ. of Alta 1975
HABITAT: Sous les bancs de neige dans les montagnes.

Draba stenopetala = D. densifolia

Draba ventosa Gray
SOURCES: CAN, UAC; Kershaw 1976, Packer & Dumais 1972, Porsild 1959 et cartes
REPARTITION: Y, oAlta; disj Wyo, Colo, Wash
ALBERTA: Parcs nationaux de Banff et de Jasper et forêt nationale Brazeau
CARTE: Mulligan 1971, Univ. of Alta 1975
HABITAT: Montagnes.
CONDITIONS: Rare dans le Colorado et l'Etat de Washington.

Draba verna L.
SOURCES: Kuijt 1973 et carte
REPARTITION: sCB-sAlta, sOnt-sQué; Cal-Mont, eE-U
ALBERTA: Parc national des lacs Waterton
CARTE: Booth & Wright 1959 Montana, Univ. of Alta 1975
HABITAT: Terres basses.

Drosera linearis Goldie
SOURCES: ALTA, CAN; IBP-CT 1974, Packer & Dumais 1972
REPARTITION: CB-oAlta-Qué, TN; Grands Lacs, Me
ALBERTA: Parc national de Banff (lac Louise) et Rocky Mountain House
CARTE: Wynne 1944
HABITAT: Marais.
CONDITIONS: Rare en Saskatchewan, en Ontario et en Nouvelle-Ecosse. Menacées d'extinction dans le Minnesota, le Wisconsin et le Maine.

Dryopteris cristata (L.) Gray
SOURCES: ALTA, CAN, DAO; Moss 1959 et carte
REPARTITION: CB-cAlta-NE-TN; Ida-noMont, Ark-CN
ALBERTA: Parc national d'Elk Island et Fort Saskatchewan
CARTE: Hultén 1958, Taylor 1970 Pacifique NO. †
HABITAT: Marais, bas-fonds et bosquets marécageux.
CONDITIONS: Eliminée dans le Texas, menacées dans la Caroline du Nord, rare dans l'Iowa, l'Illinois et le Tennessee.
PROTECTION: Protégée par la loi dans l'Etat de New-York.

Dryopteris filix-mas (L.) Schott
SOURCES: ALTA, CAN, UAC; Packer 1975-77 et carte
REPARTITION: CB-soAlta, Man, Ont, Qué, NE-TN; OrénoMont, Cal-NM, Mich-Vt
ALBERTA: Parc national des lacs Waterton
CARTE: Hultén 1964a, Taylor 1970 Pacifique NO. †
HABITAT: Bois et pentes d'éboulis ombragées.
CONDITIONS: Rare en Ontario. Eliminée dan la Californie, menacées d'extinction dans le Texas, menacées dans le Colorado et le Michigan et rare dans l'Orégon et l'Oklahoma.
PROTECTION: Protégée par la loi dans l'Etat de New-York.

Dryopteris fragrans (L.) Schott
SOURCES: ALTA, CAN, DAO; Moss 1959 et cartes
REPARTITION: Alas-TNO, CB-neAlta-Lab; Grande Lacs, Nouvelle-Angleterre
ALBERTA: Fort Chipewyan, Fort Smith et rivière des Esclaves
CARTE: Hultén 1964a, Hultén 1968, Porsild 1964 Can, Raup 1947 Can, Taylor 1970 Pacifique NO
HABITAT: Falaises de roche basique et pentes d'éboulis.
CONDITIONS: Rare en Nouvelle-Ecosse. Menacées d'extinction dans le Wisconsin et le Vermont.
PROTECTION: Protégée par la loi dans l'Etat de New-York et le Vermont.

Dryopteris phegopteris = Phegopteris polypodioides

Eleocharis elliptica Kunth
SOURCES: CAN; Moss & Pegg 1963, Packer & Dumais 1972 et carte
REPARTITION: soCB-sAlta, Man-NE-TN; Mont, Minn-Ill-Pe-RI
ALBERTA: Mayerthorpe
CARTE: Svenson 1939
HABITAT: Sable allant de l'humide au sec, rives de gravier et tourbe.
CONDITIONS: Menacées dans le Rhode-Island.

Elodea longivaginata St. John
SOURCES: CAN, DAO; Kershaw 1976, Packer & Dumais 1972 et cartes
REPARTITION: sAlta-soSask; NM-DN
ALBERTA: Gem jusqu'à Vauxhall
CARTE: St. John 1962, St. John 1965, Sculthorpe 1967
HABITAT: Terrains marécageux, étangs et lacs.

Elymus arenarius ssp. **mollis = E. mollis**

Elymus mollis Trin.
(*E. arenarius* L. ssp. *mollis* (Trin.) Hult.)
SOURCES: CAN; Moss 1959 et cartes
REPARTITION: Alas-TNO, CB, neAlta-Sask, Ont-Lab; oCal, Grands Lacs, Nouvelle-Angleterre
ALBERTA: Lac Athabasca
CARTE: Bowden 1957, Hultén 1964a, Hultén 1968, Porsild 1964 Can
HABITAT: Dunes.
CONDITIONS: Rare en Ontario. Menacées dans le Michigan.

Elymus virginicus L.
SOURCES: ALTA, DAO; Moss 1959
REPARTITION: CB-e&soAlta-Qué, NE-TN; répandu aux E-U
ALBERTA: Pincher Creek et Ribstone Creek
CARTE: Hitchcock & Chase 1950 E-U. †
HABITAT: Bois clairs et bosquets.
CONDITIONS: Menacées dans le Rhode-Island, rare dans le Arizona.

Epilobium glaberrimum Barbey
(*E. platyphyllum* Rydb.)
SOURCES: DAO; Kershaw 1976 et carte
REPARTITION: CB-soAlta; Cal-Utah-oMont
ALBERTA: Parc national des lacs Waterton
CARTE: Univ. of Alta 1975
HABITAT: Pentes humides et rivages des lacs de montagne.

Epilobium luteum Pursh
SOURCES: UAC; Moss 1959, Packer & Dumais 1972 et carte
REPARTITION: Alas, CB-oAlta; Cal
ALBERTA: Parc national de Banff
CARTE: Hultén 1968
HABITAT: Endroits humides dans les montagnes.
CONDITIONS: Rare dans la Californie.

Epilobium platyphyllum = E. glaberrimum

Erigeron divergens T. & G.
SOURCES: UAC; Packer 1975-77
REPARTITION: sCB, soAlta; Cal-Okl
ALBERTA: Parc national des lacs Waterton
CARTE: Booth & Wright 1966 Mont. †
HABITAT: Terrain sablonneux aride et terre inculte dans les vallées et les collines basses.

Erigeron evermannii = E. scotteri

Erigeron flagellaris Gray
SOURCES: ALTA, DAO, UAC; Kershaw 1976, Ogilvie 1962 et carte
REPARTITION: sCB-soAlta; disj oWyo-DS, Tex, Ariz
ALBERTA: Parc national des lacs Waterton
CARTE: Univ. of Alta 1975. †
HABITAT: Endroits à découvert.

Erigeron ochroleucus Nutt.
SOURCES: ALTA, CAN, DAO, UAC; Kershaw 1976, Ogilvie 1962
REPARTITION: soAlta; sWyo-noNeb
ALBERTA: Parc national des lacs Waterton jusqu'à rivière Highwood
CARTE: Booth & Wright 1959 Montana
HABITAT: Collines et montagnes arides.
CONDITIONS: Rare au Canada.

Erigeron pallens Cronq.
SOURCES: ALTA, CAN, DAO, UAC; Boivin 1967-72, Kershaw 1976, Moss 1959, Packer & Dumais 1972, Porsild 1959
REPARTITION: seCB-oAlta
ALBERTA: Parcs nationaux de Banff et de Jasper
HABITAT: Lieux alpins.

Erigeron radicatus Hook.
SOURCES: CAN, UAC; Boivin 1967-72, Kershaw 1976, Moss 1959
REPARTITION: soAlta-soSask
ALBERTA: Mont Ram et Nordegg
HABITAT: Collines et montagnes.
CONDITIONS: Rare au Canada.

Erigeron scotteri Boivin
(*E. evermannii* auct.)
SOURCES: ALTA, DAO; Boivin 1967, Boivin 1967-72, Kershaw 1976, Packer & Dumais 1972
REPARTITION: oAlta; clda
ALBERTA: Parcs nationaux de Banff et de Jasper
HABITAT: Lieux alpins.
CONDITIONS: Rare au Canada. Rare dans l'Idaho.

Eriogonum cernuum Nutt.
SOURCES: ALTA, CAN, DAO; Boivin 1967-72 et carte
REPARTITION: seAlta-soSask; Cal-NM-Neb
ALBERTA: Parc provincial Writing-on-Stone, Empress et Medicine Hat
CARTE: Booth & Wright 1959 Montana, Univ. of Alta 1975. †
HABITAT: Bad-lands et pentes des vallées.
CONDITIONS: Rare au Canada.

Eriophorum callitrix Cham.
SOURCES: ALTA, CAN, DAO; Packer & Dumais 1972 et cartes
REPARTITION: Alas-TNO, CB-oAlta, Man, Lab; disj soMont
ALBERTA: Parc national de Banff (Snow Creek Pass), parc provincial de Willmore Wilderness et Mountain Park
CARTE: Hultén 1968, Packer & Vitt 1974, Porsild 1964 Can
HABITAT: Marais où la sphaigne est relativement sèche.

Erysimum pallasii (Pursh) Fern.
SOURCES: ALTA, CAN, DAO; Kershaw 1976, Moss 1959, Packer & Dumais 1972, Porsild 1959 et cartes
REPARTITION: Alas-TNO, oAlta
ALBERTA: Parcs nationaux de Banff et de Jasper
CARTE: Hultén 1968, Hultén 1971, Porsild 1964
HABITAT: Montagnes.

Eupatorium purpureum L. var. **maculatum** (L.) Darl.
SOURCES: ALTA; Packer 1975-77
REPARTITION: CB, Alta, Sask-NE, TN; Utah-NM-Ill-Mich
ALBERTA: Rivière Peace
CARTE: †
HABITAT: Endroits humides.
CONDITIONS: Menacées d'extinction dans le Colorado, rare dans le Kansas.

Festuca occidentalis Hook. var. **occidentalis**
SOURCES: ALTA, DAO; Packer 1975–77
REPARTITION: sCB–soAlta, cOnt; Cal–Wyo, Grands Lacs
ALBERTA: Parc national des lacs Waterton
CARTE: Hitchcock & Chase 1950 E–U
HABITAT: Bois et bosquets.
CONDITIONS: Rare en Ontario. Menacées d'extinction dans le Wisconsin, rare dans le Wyoming.

Festuca subulata Trin.
SOURCES: ALTA, CAN; Moss 1959, Packer 1975–77 et cartes
REPARTITION: Alas, oCB–oAlta; nCal–Wyo
ALBERTA: Parc national des lacs Waterton (abondante par endroits) et rivière Castle
CARTE: Hitchcock & Chase 1950 E–U, Hultén 1968, Koyama & Kowano 1964
HABITAT: Bois humides.
CONDITIONS: Rare dans le Wyoming.

Festuca viridula Vasey
SOURCES: ALTA; Moss 1959, Packer & Dumais 1972
REPARTITION: CB–oAlta; Cal–Mont
ALBERTA: Montagne à l'est de Rock Lake
CARTE: Hitchcock & Chase 1950 E–U
HABITAT: Prairies et pentes à découvert dans les montagnes.

Fragaria vesca L. var. **bracteata** (Heller) Davis
SOURCES: ALTA, UAC; Ogilvie 1962
REPARTITION: CB–soAlta; Cal–NM
ALBERTA: Parc national des lacs Waterton
HABITAT: Versants humides des montagnes.

Franseria acanthicarpa = Ambrosia acanthicarpa

Galium palustre L.
SOURCES: ALTA, CAN; IBP–CT 1974, Kershaw & Morton 1976, Moss & Pegg 1963, Packer & Dumais 1972 et carte
REPARTITION: Y, o&cAlta, nMan–Qué; Grands Lacs–neE–U
ALBERTA: Parc national de Jasper et collines Swan
CARTE: Hultén 1958, Hultén 1968, Univ. of Alta 1975
HABITAT: Endroits humides.

Gaultheria humifusa (Graham) Rydb.
SOURCES: ALTA; Packer 1975–77 et carte
REPARTITION: CB–soAlta; nCal–Colo
ALBERTA: Parc national de Banff (lac Agnes) et parc national des lacs Waterton
CARTE: Booth & Wright 1959 Montana, Univ. of Alta 1975
HABITAT: Bois et bosquets humides.

Gayophytum humile = G. racemosum

Gayophytum racemosum T. & G.
(*G. humile* auct.)
SOURCES: ALTA, DAO; Boivin 1967–72, Kershaw 1976, Ogilvie 1962 et cartes
REPARTITION: soAlta; Cal–Colo–Mont
ALBERTA: Parc national des lacs Waterton
CARTE: Lewis & Szweykowski 1964, Univ. of Alta 1975
HABITAT: Sol sablonneux.
CONDITIONS: Rare au Canada. Rare dans le Wyoming.

Gentiana aquatica L.
SOURCES: DAO; Boivin 1967–72, Kershaw 1976 et carte
REPARTITION: Alas–TNO, CB–oAlta–soSask; Colo
ALBERTA: Calgary
CARTE: Gillett 1963
HABITAT: Rivages.
CONDITIONS: Rare au Canada. Menacées aux Etat–Unis (Smithsonian Institution 1975). Rare dans la Californie.

Gentiana calycosa Griseb. var. **obtusiloba** (Rydb.) C. L. Hitchc.
SOURCES: ALTA, CAN, DAO; Kershaw 1976, Ogilvie 1962 et carte
REPARTITION: seCB–soAlta; Mont
ALBERTA: Abondante par endroits dans le parc national des lacs Waterton
CARTE: Univ. of Alta 1975
HABITAT: Hautes montagnes.

Gentiana detonsa ssp. **raupii = Gentianella detonsa** ssp. **raupii**

Gentiana glauca Pall.
SOURCES: ALTA, CAN, DAO, UAC; et cartes
REPARTITION: Alas–Y, CB–oAlta; Mont
ALBERTA: Parcs nationaux de Banff et de Jasper (abondante par endroits) et Mountain Park
CARTE: Gillett 1963, Hultén 1968, Raup 1947, Univ. of Alta 1975
HABITAT: Montagnes.

Gentiana raupii = Gentianella detonsa ssp. **raupii**

Gentianella detonsa (Rottb.) G. Don ssp. **raupii** (Pors.) Gillett
(*Gentiana detonsa* Rottb. var. *raupii* (Pors.) Boivin, *G. raupii* Pors.)
SOURCES: ALTA; et cartes
REPARTITION: Alas–TNO, neAlta, nOnt
ALBERTA: Parc national de Wood Buffalo
CARTE: Cody 1971, Gillett 1957, Gillett 1963, Hultén 1968, Univ. of Alta 1975
HABITAT: Talus humides, rives et prairies en montagne.
CONDITIONS: Rare en Ontario.

Geranium erianthum DC.
(*G. pratense* L. var. *erianthum* (DC.) Boivin)
SOURCES: DAO; Kershaw 1976, Packer & Dumais 1972
REPARTITION: Alas–Y,nCB–soAlta
ALBERTA: Parc national de Jasper (rivière Athabasca)
CARTE: Hultén 1968
HABITAT: Prairies en montagne.

Geranium pratense var. **erianthum = G. erianthum**

Glyceria elata (Nash) M. E. Jones
SOURCES: ALTA, CAN; Packer 1975–77
REPARTITION: sCB–soAlta; Cal–NM
ALBERTA: Parc national des lacs Waterton et réserve de Crowsnest Forest
HABITAT: Bois, talus et prairies humides.

Glyceria pauciflora = Puccinellia pauciflora

Gnaphalium microcephalum Nutt. var. **thermale** (E. Nels.) Cronq.
SOURCES: ALTA, DAO; Ogilvie 1962 et carte
REPARTITION: sCB–soAlta; Cal–Colo
ALBERTA: Parc national des lacs Waterton
CARTE: Univ. of Alta 1975
HABITAT: Clairières dans les forêts.
CONDITIONS: Rare dans le Wyoming.

Gnaphalium viscosum HBK.
SOURCES: DAO; Boivin 1967–72
REPARTITION: CB–soAlta, Ont–NE; Oré–NM, Tenn
ALBERTA: Carbondale
CARTE: Booth & Wright 1959 Montana
HABITAT: Clairières dans les forêts.

Habenaria saccata = Platanthera stricta

Halimolobos virgata (Nutt.) O. E. Schulz
SOURCES: CAN; Boivin 1967–72
REPARTITION: seAlta–soSask; Utah–Colo, Cal
ALBERTA: Parc provincial des collines Cyprès et Medicine Hat
HABITAT: Sol alcalin sablonneux.
CONDITIONS: Rare au Canada. Menacées aux Etats–Unis (Smithsonian Institution 1975), rare dans le Colorado et la Californie.

Hammarbya paludosa = Malaxis paludosa

Hemieva ranunculifolia = Suksdorfia ranunculifolia

Heuchera glabra Willd.
SOURCES: CAN, DAO, UAC; Boivin 1967–72, IBP–CT 1974, Ogilvie 1962, Packer & Dumais 1972 et carte
REPARTITION: sAlas, CB–oAlta; Oré
ALBERTA: Parc national de Jasper (mont Edith Cavell)
CARTE: Hultén 1968
HABITAT: Rivages escarpés des rivières.

Hierochloe alpina (Sw.) R. & S.
SOURCES: ALTA, CAN, DAO; Moss 1959, Packer & Dumais 1972 et cartes
REPARTITION: Alas–TNO, CB–oAlta, Man, Qué, TN–Lab; Me, NY
ALBERTA: Parc national de Jasper
CARTE: Hultén 1964a, Hultén 1968, Porsild 1964 Can, Raup 1947
HABITAT: Prairies alpines.

Hippuris montana Ledeb.
SOURCES: ALTA; Packer 1975–77
REPARTITION: Alas–Y, TNO, CB–soAlta; Wash
ALBERTA: Parc national de Jasper (rivière Chaba)
CARTE: Hultén 1968, Raup 1947
HABITAT: Prairies humides et rivers des cours d'eau alpine.

Hordeum brachyantherum Nevski
(*H. jubatum* L. var. *boreale* (Hitchc.) Boivin, *H. nodosum* auct.)
SOURCES: ALTA; Dore 1975, Moss 1959, Tisdale & Budd 1948 et carte
REPARTITION: Alas–Y, CB–nAlta–Sask, TN; Cal–NM (possiblement introduite dans l'est)
ALBERTA: Fort Vermillion
CARTE: Hitchcock & Chase 1950 E–U, Hultén 1968
HABITAT: Sol salin.
CONDITIONS: Rare en Saskatchewan. Menacées d'extinction dans l'Indiana.

Hordeum jubatum var. **boreale = H. brachyantherum**

Hordeum nodosum = H. brachyantherum

Hordeum pusillum Nutt.
SOURCES: Bowden 1962, Kershaw 1976
REPARTITION: soAlta, soOnt (introduite); répandu aux Etats–Unis
CARTE: Hitchcock & Chase 1950 E–U
HABITAT: Sol salin.
CONDITIONS: Rare au Canada. Menacées d'extinction de le Minnesota et rare dans l'Iowa.

Hydrophyllum capitatum Dougl.
SOURCES: ALTA, CAN, DAO, UAC; Ogilvie 1962 et cartes
REPARTITION: sBC–soAlta; Cal–Colo
ALBERTA: Abondante par endroits depuis le parc national des lacs Waterton jusqu'à Crowsnest et Pincher Creek
CARTE: Constance 1942, Univ. of Alta 1975
HABITAT: Prairies et pentes humides.

Hymenopappus filifolius Hook. var. **polycephalus** (Oster.) B. L. Turner
SOURCES: ALTA, DAO; Boivin 1967–72, Kershaw 1976 et cartes
REPARTITION: seAlta–soSask; Mont–nColo, oDS
ALBERTA: Parc provincial Writing–on–Stone, Cardston et Rumsey
CARTE: Turner 1956, Univ. of Alta 1975. †
HABITAT: Collines et plaines arides.

Hypericum formosum HBK. var. **nortoniae** (M. E. Jones) C. L. Hitchc.
SOURCES: DAO; et cartes
REPARTITION: CB–soAlta; neOré–Wyo–Mont
ALBERTA: Abondante par endroits dans le parc national des lacs Waterton
CARTE: Gillett 1976, Univ. of Alta 1975
HABITAT: Montagnes.

Hypopitys monotropa = Monotropa hypopitys

Iliamna rivularis (Dougl.) Greene
SOURCES: ALTA, CAN, UAC; Kershaw 1976, Ogilvie 1962 et carte
REPARTITION: CB-soAlta; Oré-Colo
ALBERTA: Abondante par endroite dans le parc national des lacs Waterton
CARTE: Univ. of Alta 1975
HABITAT: Pentes en montagnes, prairies et rives des cours d'eau.
CONDITIONS: Peu commune dans l'Etat de Washington.

Iris missouriensis Nutt.
SOURCES: DAO, UAC; Kershaw 1976 et cartes
REPARTITION: oCB-seAlta; Cal-NM, DS
ALBERTA: Carway et Whiskey Gap
CARTE: De Vries 1966 Can, Ramaley 1939, Univ. of Alta 1975, †
HABITAT: Prairies et rives des cours d'eau.
CONDITIONS: Peu commune dans l'Etat de Washington.

Isoetes bolanderi Engelm.
SOURCES: CAN, DAO, UAC; Boivin 1967-72, Kershaw 1976, Ogilvie 1962
REPARTITION: sCB-soAlta; Cal-Ariz-Colo
ALBERTA: Parc national des lacs Waterton
CARTE: Taylor 1970 Pacifique NO
HABITAT: Etangs et lacs de montagne.
CONDITIONS: Rare dans le Arizona.

Juncus stygius L. ssp. **americanus** (Buch.) Hult.
SOURCES: ALTA, CAN, DAO; Packer & Dumais 1972 et carte
REPARTITION: Alas, TNO, CB-o&cAlta-Sask, Ont-NB, NE-Lab; Minn-Mich, NY, Me
ALBERTA: Parc national de Banff (lac Louise), Hinton et collines Swan
CARTE: Hultén 1958, Hultén 1968, Moss & Pegg 1963 cAlta
HABITAT: Marais.
CONDITIONS: Rare en Saskatchewan et en Nouvelle-Ecosse. Menacées d'extinction dans le Minnesota et le Maine, menacées dans le Michigan.

Koenigia islandica L.
SOURCES: ALTA, CAN; Moss 1959, Packer & Dumais 1972 et cartes
REPARTITION: Alas-TNO, CB, oAlta, Man, nOnt, nQué, Lab; disj Mont, Colo
ALBERTA: Parc national de Jasper (mont Whistler et mont Edith Cavell)
CARTE: Cody 1971, Hultén 1968, Hultén 1971, Porsild 1964 Can
HABITAT: Endroits humides.
CONDITIONS: Rare en Ontario. Rare dans le Colorado.

Larix occidentalis Nutt.
SOURCES: ALTA, CAN; Moss 1959 et cartes
REPARTITION: CB-oAlta; Oré-noMont
ALBERTA: Kananaskis
CARTE: Hosie 1969 Can, Little 1971
HABITAT: Vallées de montagne et partie inférieure des pentes.

Lesquerella alpina (Nutt.) Wats.
SOURCES: ALTA, CAN, DAO
REPARTITION: sAlta-soSask; Colo-Kan-DN
ALBERTA: Parc provincial Writing-on-Stone, Whiskey Gap et Onefour
CARTE: †
HABITAT: Plaines et collines arides.
CONDITIONS: Rare dans le Colorado et le Kansas.

Lewisia pygmaea (Gray) Robins.
SOURCES: ALTA, DAO; Kershaw 1976, Moss 1959, Ogilvie 1962 et carte
REPARTITION: Y, CB-soAlta; Cal-NM
ALBERTA: Parc national des lacs Waterton
CARTE: Booth & Wright 1959 Montana, Hultén 1968
HABITAT: En haute montagne.
CONDITIONS: Rare dans l'Idaho.

Lilaea scilloides (Poir.) Haum.
SOURCES: ALTA, DAO; Kershaw 1976, Moss 1944, Packer 1975-77 et carte
REPARTITION: CB-seAlta-sSask; Cal-Mont
ALBERTA: Parc provincial des collines Cyprès et Manyberries
CARTE: Univ. of Alta 1975
HABITAT: Terrains marécageux et plages de vase.
CONDITIONS: Rare en Saskatchewan.

Listera caurina Piper
SOURCES: Ogilvie 1962 et cartes
REPARTITION: Alas, CB-oAlta; Cal-Wyo
ALBERTA: Parc national de Banff jusqu'au parc national des lacs Waterton
CARTE: Luer 1975, Univ. of Alta 1975
HABITAT: Forêts humides et rives des cours d'eau.
CONDITIONS: Rare dans le Wyoming.
PROTECTION: Un permis d'exportation est requis selon la Convention sur le commerce international des espèces de faune et de flore sauvages menacées d'extinction (Canada 1973, 1975) ratifiée par le Canada et les Etats-Unis.

Listera convallarioides (Swartz) Nutt.
SOURCES: Cartes
REPARTITION: CB-soAlta-TN; Cal-Ariz, Mont-Wyo, Grands Lacs-Me
ALBERTA: Rivière Castle
CARTE: Luer 1975, Univ. of Alta 1975
HABITAT: Endroits ombragés et humides.
CONDITIONS: Menacées d'extinction dan le Vermont et le Minnesota, menacées dans le Wisconsin et rare dans le Arizona.
PROTECTION: Un permis d'exportation est requis selon la Convention sur le commerce international des espèces de faune et de flore sauvages menacées d'extinction (Canada 1973, 1975) ratifiée par le Canada et les Etats-Unis. Protégée par la loi dans le Minnesota, le Michigan, l'Etat de New-York et le Vermont.

Lithophragma parviflora (Hook.) Nutt.
SOURCES: ALTA, CAN, DAO, UAC; Scotter 1976 et cartes
REPARTITION: CB-soAlta; nCal-Colo-DS
ALBERTA: Abondante par endroits depuis le parc national de Banff jusqu'au parc national des lacs Waterton
CARTE: Taylor 1965, Univ. of Alta 1975
HABITAT: Prairies, prés et forêts à faible altitude.

Lobelia dortmanna L.
SOURCES: ALTA; Packer 1975-77 et carte
REPARTITION: soCB, neAlta, Sask, Man-Lab; nOré, Grands Lacs, neE-U
ALBERTA: Rivière Richardson
CARTE: Fernald 1933, Hultén 1958, McVaugh 1936
HABITAT: En eau peu profonde sur le bord des lacs et étangs.
CONDITIONS: Menacées dans le Rhode-Island.

Lobelia spicata Lam.
SOURCES: DAO; Packer & Dumais 1972
REPARTITION: cAlta-NE; DS-Ark-Ge-Me
ALBERTA: District de Craigmyle
CARTE: Booth & Wright 1959 Montana, McVaugh 1936
HABITAT: Prairies grésses, champs et bosquets.
CONDITIONS: Menacées d'extinction dans le Dakota du Sud.

Loiseleuria procumbens (L.) Desv.
SOURCES: ALTA, DAO; Cody et al. 1974, Packer & Dumais 1972
REPARTITION: Alas-TNO, oCB-oAlta, noSask-nMan, Qué, NE-Lab; Wash, Nouvelle-Angleterre
ALBERTA: Parc national de Jasper
CARTE: Hultén 1958, Hultén 1968, Porsild 1964 Can
HABITAT: Sol acide dans les montagnes.
CONDITIONS: Rare en Saskatchewan. Menacées d'extinction dans le Maine, rare dans l'Etat de Washington.

Lomatium cous (Wats.) C. & R.
SOURCES: ALTA, UAC; Boivin 1967-72, Packer & Dumais 1972
REPARTITION: seAlta-soSask; eOré-nWyo
ALBERTA: Parc provincial des collines Cyprès
CARTE: Booth & Wright 1959 Montana
HABITAT: Pentes et bas-fonds arides et rocheux, à découvert.
CONDITIONS: Rare au Canada.

Lomatium sandbergii C. & R.
SOURCES: ALTA, CAN, DAO; Kershaw 1976, Ogilvie 1962, Packer 1975-77 et cartes
REPARTITION: seCB-soAlta; nIda-noMont
ALBERTA: Parc national des lacs Waterton (abondante par endroits) et mont North Kootenay.
CARTE: Booth & Wright 1959 Montana, Cash 1954, Univ. of Alta 1975
HABITAT: En haute montagne.

Luetkea pectinata (Pursh) Kuntze
SOURCES: ALTA, CAN, DAO, UAC; et cartes
REPARTITION: sAlas-soY, CB-oAlta; nCal-oMont
ALBERTA: Parc national de Banff (rivière Saskatchewan nord) et parc national de Jasper
CARTE: Booth & Wright 1959 Montana, Hultén 1968, Univ. of Alta 1975
HABITAT: En haute montagne.

Lupinus arbustus Dougl. ssp. **pseudoparviflorus** (Rydb.) Dunn
SOURCES: Cartes
REPARTITION: sCB-soAlta; Nev-oMont
CARTE: Dunn 1957 E-U, Dunn & Gillett 1966 Can
HABITAT: Endroits ombragés et humides.

Lupinus arcticus S. Wats. ssp. **subalpinus** (Piper & Rob.) Dunn
SOURCES: Cartes
REPARTITION: CB-soAlta; Oré
CARTE: Dunn 1965, Dunn & Gillett 1966

Lupinus minimus Dougl.
SOURCES: CAN; Dunn & Gillett 1966, Kershaw 1976
REPARTITION: sCB-soAlta; Oré
ALBERTA: Parc national des lacs Waterton (abondante par endroits) et Coleman

Lupinus nootkatensis Donn
SOURCES: ALTA, CAN, DAO; IBP-CT 1974, Ogilvie 1962, Packer & Dumais 1972 et carte
REPARTITION: sAlas, CB-oAlta, oNE (introduite)
ALBERTA: Parc national de Jasper et parc provincial de Willmore Wilderness
CARTE: Dunn 1965, Dunn & Gillett 1966, Hultén 1968

Lupinus polyphyllus Lindl.
SOURCES: DAO; IBP-CT 1974, Packer & Dumais 1972 et carte
REPARTITION: Alas, CB-oAlta, Ont-TN (introduite dans l'est); Cal
ALBERTA: Livingstone Ridge
CARTE: Dunn 1965, Dunn & Gillett 1966, Hultén 1968, Phillips 1955
HABITAT: Berges des rivières, criques et prairies.

Lupinus wyethii S. Wats.
SOURCES: CAN; Packer & Dumais 1972 et carte
REPARTITION: sCB-sAlta; Cal-Colo
ALBERTA: Medicine Hat
CARTE: Booth & Wright 1959 Montana, Dunn & Gillett 1966 Can

Luzula acuminata Raf.
SOURCES: ALTA, DAO; Packer & Dumais 1972
REPARTITION: cAlta-TN; Minn-Ala-Ge-Me
ALBERTA: Collines Swan et lac Chip
CARTE: Ebinger 1962, Hultén 1964a
HABITAT: Bois, clairières et collines escarpées.
CONDITIONS: Menacées d'extinction dans la Géorgie, rare dans l'Iowa et l'Illinois.

Luzula arcuata (Wahl.) Sw.

SOURCES: ALTA, CAN, DAO, UAC; Packer & Dumais 1972 et cartes

REPARTITION: Alas-TNO, CB-oAlta; Wash

ALBERTA: Parc national de Jasper (mont Edith Cavell), parc national de Banff et Cadomin

CARTE: Hultén 1968, Raup 1947

HABITAT: Sol rocheux ou graveleux.

CONDITIONS: Rare dans l'Etat de Washington.

Lycopodium inundatum L.

SOURCES: CAN

REPARTITION: Alas, CB, neAlta, Sask, Ont-Lab; Cal-Mont, Minn-l'est

ALBERTA: Rivière Maybelle

HABITAT: Dépressions humides dans des dunes.

CONDITIONS: Menacées d'extinction dans la Californie et l'Indiana, menacées dans le Rhode-Island et rare dans l'Orégon, l'Idaho et l'Illinois.

PROTECTION: Protégée par la loi dans le Michigan et l'Etat de New-York.

Lycopodium sabinaefolium var. **sitchense** = **L. sitchense**

Lycopodium sitchense Rupr.

(*L. sabinaefolium* Willd. ssp. *sitchense* (Rupr.) Calder & Taylor)

SOURCES: CAN, DAO; Packer 1975-77 et cartes

REPARTITION: Alas, CB-c&soAlta-Sask; Oré-Mont, Grands Lacs-Nouvelle-Angleterre

ALBERTA: Parc national des lacs Waterton et collines Swan

CARTE: Hultén 1968, Porsild 1966 Can, Taylor 1970 Pacifique NO, Univ. of Alta 1975

HABITAT: Bosquets, bois clairs et landes.

CONDITIONS: Rare en Saskatchewan. Menacées dans le Michigan et rare dans l'Idaho et l'Orégon.

PROTECTION: Protégée par la loi dans le Michigan le Etat de New-York.

Lygodesmia rostrata Gray

SOURCES: Wallis 1977

REPARTITION: sAlta-soMan; Colo-Neb

HABITAT: Endroits sablonneux.

CONDITIONS: Rare en Saskatchewan. Eliminée dans le Texas.

Machaeranthera tanacetifolia (HBK.) Nees

(*Aster tanacetifolius* HBK.)

SOURCES: CAN; Boivin 1967-72, Kershaw 1976

REPARTITION: soAlta; Ariz-Tex-Neb

ALBERTA: Rivière Belly

CARTE: Booth & Wright 1959 Montana, †

HABITAT: Ruisseaux.

CONDITIONS: Rare au Canada.

Malaxis monophyllos (L.) Sw. var. **brachypoda** (Gray) Morris & Eames

SOURCES: ALTA; et carte

REPARTITION: Alas-Y, CB-cAlta-NB, NE-TN; disj Cal, Colo, Grands Lacs-Me-NJ

ALBERTA: Edmonton, Rife et lac Ste-Anne

CARTE: Hultén 1964, Hultén 1968, Luer 1975

HABITAT: Bois humides, berges et marais.

CONDITIONS: Rare en Nouvelle-Ecosse et en Saskatchewan. Eliminée dans l'Illinois, menacées d'extinction dans le Colorado, le Vermont et le Maine, menacées dans le Wisconsin, rare dans la Californie, le Connecticut et le New-Jersey.

PROTECTION: Un permis d'exportation est requis selon la Convention sur le commerce international des espèces de faune et de flore sauvages menacées d'extinction (Canada 1973, 1975) ratifiée par le Canada et les Etats Unis. Protegée par la loi dans le Minnesota, le Wisconsin, le Michigan, l'Etat de New-York et le Vermont.

Malaxis paludosa (L.) Sw.

(*Hammarbya paludosa* (L.) Ktze.)

SOURCES: ALTA, DAO; Kershaw 1976, Moss 1959 et carte

REPARTITION: sAlas, TNO, sCB, cAlta, sSask, Ont; nMinn

ALBERTA: Glenevis

CARTE: Hultén 1958, Hultén 1968, Luer 1975

HABITAT: Marsis à sphaigne humide.

CONDITIONS: Rare en Saskatchewan et en Ontario. Menacées d'extinction dans le Minnesota.

PROTECTION: Un permis d'exportation est requis selon la Convention sur le commerce international des expèces de faune et de flore sauvages menacées d'extinction (Canada 1973, 1975) ratifiée par le Canada et les Etats-Unis. Protegée par la loi dans le Minnesota.

Melandrium affine (J. Vahl) Hartm.

(*Silene involucrata* (C. & S.) Bocq.)

SOURCES: CAN; Moss 1959, Packer & Dumais 1972, Weir 1974 et carte

REPARTITION: Alas-TNO, CB-oAlta, Man-Qué, Lab

ALBERTA: Parc national de Banff

CARTE: Hultén 1968, Hultén 1971, Porsild 1964, Univ. of Alta 1975

Melica smithii (Porter) Vasey

SOURCES: CAN, UAC; Moss 1959 et cartes

REPARTITION: CB-soAlta, sOnt; Oré-Wyo, Grands Lacs

ALBERTA: Parc national des lacs Waterton et Castlemount

CARTE: Boyle 1945, Fernald 1935

HABITAT: Bois humides.

CONDITIONS: Rare en Ontario. Menacées d'extinction dans le Wisconsin, rare dans le Wyoming.

Melica spectabilis Scribn.

SOURCES: CAN, UAC; Kershaw 1976 et carte

REPARTITION: sCB-oAlta; nCal-Colo

ALBERTA: Parc national de Banff (région Sunshine) et Castlemount

CARTE: Boyle 1945

HABITAT: Bois clairs et prairies.

Mertensia longiflora Greene

SOURCES: ALTA, CAN, DAO, UAC; Ogilvie 1962 et carte

REPARTITION: sCB-soAlta; Nev-nWyo-oMont

ALBERTA: Abondante par endroits dans le parc national des lacs Waterton

CARTE: Booth & Wright 1959 Montana, Univ. of Alta 1975

HABITAT: Pentes et talus en montagne.

Microseris cuspidata (Pursh) Schultz-Bip.

SOURCES: CAN; Packer & Dumais 1972

REPARTITION: sAlta-soMan; Okl-Ill-Wis-Colo

ALBERTA: Milk River et Red Deer

CARTE: Booth & Wright 1959 Montana. †

HABITAT: Steppes sur les flancs de colline.

CONDITIONS: Rare dans l'Illinois.

Microseris nutans (Geyer) Schultz-Bip.

SOURCES: ALTA, CAN, DAO; Ogilvie 1962

REPARTITION: CB-soAlta; Cal-Colo

ALBERTA: Parc national des lacs Waterton (abondante par endroits), Coleman et rivière Oldman

CARTE: Booth & Wright 1959 Montana

HABITAT: Pentes arides ou humides, régions herbeuses et bois clairs.

Microsteris gracilis (Hook.) Greene
(*Phlox gracilis* (Hook.) Greene)

SOURCES: ALTA, UAC; Boivin 1967-72, Moss 1959, Ogilvie 1962, Packer 1975-77

REPARTITION: sAlas-sY, sCB-soAlta; Cal-NM

ALBERTA: Mont North Kootenay jusqu'à Crowsnest

CARTE: Booth & Wright 1959 Montana, Hultén 1968

HABITAT: Pentes et bosquets.

Mimulus floribundus Dougl.

SOURCES: ALTA; Moss 1959, Ogilvie 1962

REPARTITION: sCB-soAlta; Cal, Mont, Ark

ALBERTA: Hillcrest

CARTE: Booth & Wright 1959 Montana

HABITAT: Terrain humide.

CONDITIONS: Rare dans l'Arkansas.

Mimulus guttatus DC.

SOURCES: ALTA, CAN, DAO, UAC; Ogilvie 1962 et carte

REPARTITION: Alas-Y, CB-sAlta-Sask; Cal-NM-DN (introduite aux eE-U)

ALBERTA: Parc national des lacs Waterton (abondante par endroits), Crowsnest et parc provincial des collines Cyprès

CARTE: Booth & Wright 1959 Montana, Hultén 1968. †

HABITAT: Terrain humide, prairies et cours d'eau.

CONDITIONS: Rare en Saskatchewan. Menacées d'extinction dans le Dakota du Nord.

Mimulus lewisii Pursh

SOURCES: ALTA, CAN, DAO, UAC; Ogilvie 1962 et carte

REPARTITION: sAlas, CB-soAlta; Cal-Colo-Wyo

ALBERTA: Parc national des lacs Waterton (abondante par endroits), mont North Kootenay et réserve de Crowsnest Forest

CARTE: Booth & Wright 1959 Montana, Hultén 1968, Univ. of Alta 1975

HABITAT: Le long des torrents de montagne et des lacs.

CONDITIONS: Rare dans le Colorado.

Monotropa hypopitys L.
(*Hypopitys monotropa* Crantz.)

SOURCES: ALTA, CAN, DAO; Ogilvie 1962, Packer 1975-77, Wallis 1977 et cartes

REPARTITION: Alas, CB-soAlta-Sask, Ont-TN; répandu aux E-U

ALBERTA: Parc national des lacs Waterton jusqu'à la réserve de Crowsnest Forest et au parc provincial des collines Cyprès

CARTE: Booth & Wright 1959 Montana, Hultén 1968, Hultén 1971, Univ. of Alta 1975

HABITAT: Bois de conifères.

CONDITIONS: Rare en Saskatchewan. Menacées d'extinction dans le Texas et la Géorgie, rare dans l'Orégon, et le Kansas.

PROTECTION: Protégée par la loi dans le Nouveau-Mexique.

Montia linearis (Dougl.) Greene
(*Claytonia linearis* Dougl.)

SOURCES: ALTA, CAN, DAO, UAC; Moss 1959, Ogilvie 1962, Packer 1975-77

REPARTITION: CB-soAlta-soSask; Cal-nMont

ALBERTA: Parc national des lacs Waterton jusqu'à Pincher Creek

CARTE: Booth & Wright 1959 Montana

HABITAT: Terrain humide dans les plaines et sur les collines.

CONDITIONS: Rare en Saskatchewan.

Montia parvifolia (Moc.) Greene
(*Claytonia parvifolia* Moc.)

SOURCES: ALTA, CAN; Ogilvie 1962, Packer 1975-77 et cartes

REPARTITION: seAlas, CB-soAlta; Cal-Utah-Mont

ALBERTA: Abondante par endroits dans le parc national des lacs Waterton

CARTE: Booth & Wright 1959 Montana, Hultén 1968, Univ. of Alta 1975

HABITAT: Endroits humides dans les montagnes.

Muhlenbergia asperifolia (Nees & Meyen) Parodi

SOURCES: DAO; Wallis 1977

REPARTITION: seCB-sAlta-sMan; Cal-Tex-Vallée du Mississippi

ALBERTA: Gem

CARTE: Hitchcock & Chase 1950 E-U. †

HABITAT: Bas-fonds sablonneux et salins.

Munroa squarrosa (Nutt.) Torr.
SOURCES: CAN, DAO; Moss 1959, Tisdale & Budd 1948
REPARTITION: eAlta-Sask; Cal-Tex
ALBERTA: Medicine Hat et Hardisty
CARTE: Hitchcock & Chase 1950 E-U, Porter 1950 Wyoming. †
HABITAT: Plaines arides, pentes et sols remués.

Myosurus aristatus Benth.
(*M. minimus* L. var. *aristatus* (Benth.) Boivin)
SOURCES: ALTA, CAN, DAO, UAC; Kershaw 1976 et carte
REPARTITION: sCB-seAlta-sSask; Cal-Utah
ALBERTA: Medicine Hat, Manyberries et Warner
CARTE: Booth & Wright 1959 Montana, Univ. of Alta 1975
HABITAT: Plages de vase et dépressions dans la prairie.

Myosurus minimus var. **aristatus** = **M. aristatus**

Nemophila breviflora Gray
SOURCES: ALTA, CAN, DAO; Kershaw 1976, Ogilvie 1962 et carte
REPARTITION: sCB-soAlta; Cal-nUtah-Ida
ALBERTA: Abondante par endroits dans le parc national des lacs Waterton
CARTE: Constance 1941, Univ. of Alta 1975
HABITAT: Endroits humides dans les montagnes.

Oenothera andina = **Camissonia andina**

Oenothera breviflora = **Camissonia breviflora**

Oenothera caespitosa Nutt. var. **psammophila** (Nels. & MacBr.) Munz
(*O. psammophila* Nels. & MacBr.)
SOURCES: DAO; Boivin 1967-72
REPARTITION: soAlta; Ida
ALBERTA: Cardston
HABITAT: Argiles dénudées et bad-lands.
CONDITIONS: Rare au Canada. Menacées d'extinction aux Etats-Unis (United States 1976) et I Idaho.

Oenothera flava (Nels.) Garratt
SOURCES: ALTA, CAN, DAO; Kershaw 1976 et carte
REPARTITION: eAlta-sSask; NM-Cal-eWash
ALBERTA: Parc provincial des collines Cyprès, Empress, collines Hand, Pincher Creek et Calgary
CARTE: Booth & Wright 1959 Montana, Univ. of Alta 1975. †
HABITAT: Argilières.
CONDITIONS: Rare dans l'Etat de Washington.

Oenothera psammophila = **O. caespitosa** var. **psammophila**

Orobanche ludoviciana Nutt.
SOURCES: ALTA, CAN, DAO, UAC; Boivin 1967-72
REPARTITION: CB-se&cAlta-soMan; Cal-Tex-Ind
ALBERTA: Medicine Hat, Manyberries et Fort Saskatchewan
CARTE: Booth & Wright 1959 Montana. †
HABITAT: Prairies; parasite de Artemisia et autres composées.
CONDITIONS: Menacées d'extinction dans le Missouri, rare dans l'Iowa et l'Illinois.

Orobanche uniflora L.
SOURCES: ALTA, DAO; Boivin 1967-72 et carte
REPARTITION: CB-soAlta-soSask, Ont-TN; répandu aux E-U
ALBERTA: Abondante par endroits depuis le parc national des lacs Waterton jusqu'à Castle River et Morley
CARTE: Booth & Wright 1959 Montana, Univ. of Alta 1975
HABITAT: Bois humides ou régions herbeuses.
CONDITIONS: Rare en Saskatchewan. Menacées d'extinction dans la Caroline du Sud, menacées dans le Wisconsin, rare dans l'Iowa et l'Alabama.

Oryzopsis canadensis (Poir.) Torr.
SOURCES: ALTA, CAN, DAO; Packer 1975-77
REPARTITION: CB-cAlta-Lab; Wyo, Grands Lacs, Nouvelle-Angleterre-les Appalaches
ALBERTA: Fort Saskatchewan (abondante par endroits), lac Pigeon et Olds
CARTE: Hitchcock & Chase 1950 E-U
HABITAT: Bosquets et bois.
CONDITIONS: Rare en Nouvelle-Ecosse. Menacées d'extinction dans le Wisconsin menacées dans le Michigan.

Oryzopsis exigua Thurb.
SOURCES: ALTA, DAO, UAC; Kershaw 1976, Packer 1975-77
REPARTITION: seCB-soAlta; Nev-Colo
ALBERTA: Parc national des lacs Waterton jusqu'à Castle River
CARTE: Hitchcock & Chase 1950 E-U
HABITAT: Terrain aride et dégagé ou bois clairs dans les montagnes.

Oryzopsis micrantha (Trin. & Rupr.) Thurb.
SOURCES: CAN; Wallis 1977
REPARTITION: CB-oAlta-soMan; eMont-Cal-NM-Okla
ALBERTA: Carcajou et Kananaskis
CARTE: Hitchcock & Chase 1950 E-U. †
HABITAT: Bois clairs et crêtes ou pentes rocheuses.
CONDITIONS: Eliminée dans le Texas, rare dans la Californie et l'Oklahoma.

Osmorhiza aristata var. **longistylis** = **O. longistylis**

Osmorhiza chilensis var. **purpurea** = **O. purpurea**

Osmorhiza longistylis (Torr.) DC.
(*O. aristata* (Thunb.) Mak. & Yabe var. *longistylis* (Torr.) Boivin)
SOURCES: ALTA, CAN, DAO; et cartes
REPARTITION: se&cAlta–NB,NE; eWyo–Tex–eE–U
ALBERTA: Parc provincial des collines Cyprès, Medicine Hat et Edmonton (abondante par endroits)
CARTE: Constance & Shan 1948, Univ. of Alta 1975. †
HABITAT: Bois humides.

Osmorhiza occidentalis (Nutt.) Torr.
SOURCES: CAN, UAC; Kershaw 1976, Ogilvie 1962 et carte
REPARTITION: seCB–soAlta; Cal–Colo–oMont
ALBERTA: Parc national des lacs Waterton (abondante par endroits) jusqu'à Crowsnest et Pincher Creek
CARTE: Constance & Shan 1948
HABITAT: Bois dans les montagnes.

Osmorhiza purpurea (C. & R.) Suksd.
(*O. chilensis* H. & A. var. *purpurea* (C. & R.) Boivin)
SOURCES: CAN; et carte
REPARTITION: sAlas, CB–soAlta; Cal–noMont
ALBERTA: Parc national des lacs Waterton jusqu'au mont North Kootenay
CARTE: Constance & Shan 1948, Hultén 1968, Univ. of Alta 1975
HABITAT: Bois et pentes en montagne.

Oxytropis lagopus Nutt. var. **conjugans** Barneby
SOURCES: DAO; Kershaw 1976, Packer & Dumais 1972, Shaw 1966
REPARTITION: soAlta; noMont
ALBERTA: Cardston
CARTE: Barneby 1952
HABITAT: Steppe vallonnée au sol graveleux.
CONDITIONS: Rare au Canada.

Pachistima myrsinites (Pursh) Raf.
SOURCES: ALTA, DAO, UAC; Ogilvie 1962 et carte
REPARTITION: CB–soAlta; Cal–oColo
ALBERTA: Abondante par endroits depuis le parc national des lacs Waterton jusqu'à Crowsnest Pass
CARTE: Booth & Wright 1959 Montana, Univ. of Alta 1975
HABITAT: Bois de conifères et pentes en montagne.

Panicum leibergii Scribn.
SOURCES: DAO; Packer 1975–77
REPARTITION: cAlta–soOnt; DN–Tex–NY
ALBERTA: Holborn Ferry (23 mi. ouest d'Edmonton)
CARTE: Hitchcock & Chase 1950 E–U. †
CONDITIONS: Menacées dans le Michigan et la Pennsylvanie et rare dans l'Indiana le Kansas.

Panicum occidentale Scribn.
(*P. thermale* auct.)
SOURCES: CAN; Kershaw 1976, Moss 1959, Packer 1975–77
REPARTITION: sCB–soAlta; Cal–Ariz, oMont–Wyo
ALBERTA: Parc national de Banff
CARTE: Hitchcok & Chase 1950 E–U
HABITAT: Sol mouillé à proximité des sources chaudes dans les montagnes.
CONDITIONS: Menacées d'extinction dans la Californie.

Panicum thermale = P. occidentale

Panicum wilcoxianum Vasey
SOURCES: CAN, DAO; Moss 1959
REPARTITION: cAlta–soMan; NM–Ill
ALBERTA: Fort Saskatchewan
CARTE: Hitchcock & Chase 1950 E–U. †
HABITAT: Endroits arides à découvert.
CONDITIONS: Rare en Saskatchewan. Rare dans le Colorado.

Papaver freedmanianum D. Löve
SOURCES: ALTA; Kershaw 1976, Löve & Freedman 1956, Packer & Dumais 1972
REPARTITION: Alas–TNO, oAlta
ALBERTA: Parc national de Jasper (collines Opal)

Papaver kluanensis D. Löve
SOURCES: CAN, UAC; Kershaw & Morton 1976, Löve & Freedman 1956, Packer 1975–77 et cartes
REPARTITION: Y, oAlta; Wyo–NM
ALBERTA: Parc national de Banff jusqu'au parc national de Jasper
CARTE: Löve 1969, Univ. of Alta 1975
HABITAT: Lieux alpins exposés.

Papaver nudicaule var. **coloradense = P. pygmaeum**

Papaver pygmaeum Rydb.
(*P. nudicaule* L. var. *coloradense* Fedde)
SOURCES: ALTA, CAN, DAO; Kershaw 1976, Ogilvie 1962, Packer 1975–77 et cartes
REPARTITION: CB–soAlta; noMont
ALBERTA: Parc national des lacs Waterton (abondante par endroits) et parc national de Jasper (glacier Athabasca)
CARTE: Löve 1969, Univ. of Alta 1975
HABITAT: Lieux alpins élevés.
CONDITIONS: Rare dans le Montana.

Pedicularis arctica R. Br.
(*P. langsdorfii* Fisch. ssp. *arctica* (R. Br.) Pennell)
SOURCES: ALTA, CAN; et cartes
REPARTITION: Alas–TNO, CB–oAlta
ALBERTA: Parc national de Jasper (abondante par endroits) et parc national de Banff
CARTE: Hultén 1968, Hultén 1971, Porsild 1964, Univ. of Alta 1975
HABITAT: Lieux alpins.

Pedicularis flammea L.
SOURCES: ALTA, CAN, UAC; Kershaw 1976, Moss 1959, Packer & Dumais 1972, Weir 1974 et cartes
REPARTITION: TNO, oAlta, Man-Qué, TN-Lab
ALBERTA: Parc national de Jasper et parc provincial de Willmore Wilderness (abondante par endroits)
CARTE: Hultén 1958, Hultén 1968, Packer & Vitt 1974, Porsild 1964, Univ. of Alta 1975
HABITAT: Lieux alpins.
CONDITIONS: Rare en Ontario.

Pedicularis kanei Dur.
(*P. lanata* auct.)
SOURCES: ALTA, DAO; et cartes
REPARTITION: Alas-TNO, CB-oAlta, nQué
ALBERTA: Parc provincial de Willmore Wilderness, Mountain Park et Cadomin
CARTE: Hultén 1968, Porsild 1964, Raup 1947, Univ. of Alta 1975
HABITAT: Lieux alpins.

Pedicularis lanata = P. kanei

Pedicularis langsdorfii ssp. **arctica = P. arctica**

Pedicularis macrodonta Richards.
(*P. parviflora* auct.)
SOURCES: CAN; Boivin 1967-72 et carte
REPARTITION: Alas-TNO, CB, cAlta, Sask, Man, Ont, Qué
ALBERTA: Ma-Me-O Beach (abondante par endroits) et collines Swan
CARTE: Hultén 1968
HABITAT: Marais et prairies humides.

Pedicularis parviflora = P. macrodonta

Pedicularis racemosa Dougl. var. **alba** (Pennell) Cronq.
SOURCES: ALTA, DAO; Boivin 1967-72, Moss 1959, Packer 1975-77
REPARTITION: CB-oAlta; Cal-NM
ALBERTA: Parc national de Jasper
HABITAT: Pentes en montagne.

Pellaea atropurpurea (L.) Link.
SOURCES: CAN; Kershaw 1976, Packer 1975-77 et cartes
REPARTITION: CB-oAlta-Sask, Ont-Qué; Fle-Ariz-DS
ALBERTA: Parc national de Banff (Canmore)
CARTE: Rigby & Britton 1970 Can, Tryon 1957, Tryon 1972, Univ. of Alta 1975. †
HABITAT: Sur les roches calcaires.
CONDITIONS: Rare en Saskatchewan et en Ontario. Menacées d'extinction dans le Minnesota, le Wisconsin, la Caroline du Sud et la Virginie d'Ouest, menacées dans le Michigan et le Rhode Island, rare dans le Colorado, l'Iowa et la Louisiane.
PROTECTION: Protegée par la loi dans l'Etat de New-York.

Penstemon albertinus Greene
SOURCES: ALTA, CAN, UAC; Boivin 1967-72, Kershaw 1976, Ogilvie 1962 et carte
REPARTITION: seCB-soAlta; Ida-noMont
ALBERTA: Abondante par endroits depuis le parc national des lacs Waterton jusqu'à la réserve de Crowsnest Forest
CARTE: Keck 1945
HABITAT: Montagnes.

Penstemon fruticosus (Pursh) Greene ssp. **scouleri** (Lindl.) Penn. & Keck
SOURCES: ALTA, CAN, DAO; Moss 1959
REPARTITION: sCB-soAlta; Wash-Ida
ALBERTA: Parc national des lacs Waterton, Crowsnest et Hillcrest
HABITAT: Endroits rocheux, dégagés ou boisés.

Penstemon lyallii Gray
SOURCES: ALTA, CAN, DAO, UAC; Kershaw 1976, Ogilvie 1962 et carte
REPARTITION: seCB-soAlta; eWash-noMont
ALBERTA: Abondante par endroits depuis le parc national des lacs Waterton jusqu'à Crowsnest
CARTE: Booth & Wright 1959 Montana, Univ. of Alta 197
HABITAT: Montagnes.

Phacelia linearis (Pursh) Holz.
SOURCES: ALTA, CAN, DAO, UAC; Ogilvie 1962 et carte
REPARTITION: sCB-soAlta; nCal-Utah-Wyo
ALBERTA: Parc national des lacs Waterton (abondants par endroits), réserve de Crowsnest Forest, Pincher Creek et Milk River
CARTE: Gillett 1962, Univ. of Alta 1975
HABITAT: Pentes et plaines.

Phacelia lyallii (Gray) Rydb.
SOURCES: ALTA, CAN, UAC; Kershaw 1976, Ogilvie 1962 et cartes
REPARTITION: seCB-soAlta; Ida-oMont
ALBERTA: Abondante par endroits dans le parc national des lacs Waterton
CARTE: Gillett 1960, Univ. of Alta 1975
HABITAT: Pentes alpines.
CONDITIONS: Rare dans le Montana et l'Idaho.

Phegopteris polypodioides Fée
(*Thelypteris phegopteris* (L.) Slosson, *Dryopteris phegopteris* (L.) Christ.)
SOURCES: CAN, DAO; Boivin 1967-72, IBP-CT 1974, Ogilvie 1962, Packer & Dumais 1972
REPARTITION: Alas-Y, CB-cAlta-Lab; Oré-Mont, Grands Lacs-eE-U
ALBERTA: Collines Swan et Whitecourt
CARTE: Hultén 1968, Taylor 1970 Pacifique NO
HABITAT: Bois clairs et humides, roches et crevasses moussues et humides.
CONDITIONS: Rare en Saskatchewan. Menacées d'extinction dans la Caroline du Nord, menacées dans le Rhode-Island, rare dans l'Orégon, l'Illinois et le Tennessee.
PROTECTION: Protégée par la loi dans l'Etat de New-York.

Philadelphus lewisii Pursh
SOURCES: ALTA, CAN, DAO, UAC; Kuijt 1973, Kuijt & Trofymow 1975, Moss 1959, Ogilvie 1962
REPARTITION: CB-soAlta; nCal-oMont
ALBERTA: Abondante par endroits dans le parc national des lacs Waterton
CARTE: Hu 1954-56
HABITAT: Pentes en montagne.

Phlox alyssifolia Greene
SOURCES: ALTA, CAN, DAO, UAC; Boivin 1967-72, Kershaw 1976, Ogilvie 1962 et cartes
REPARTITION: soAlta-soSask; soMont-ncColo-oDN-DS
ALBERTA: Whiskey Gap, Cardston et Pincher Creek
CARTE: Univ. of Alta 1975, Wherry 1955, †
HABITAT: Pentes rocheuses et graveleuses.
CONDITIONS: Rare au Canada.

Phlox gracilis = Microsteris gracilis

Physocarpus malvaceus (Greene) Kuntze
SOURCES: ALTA, CAN, DAO; Boivin 1967-72, Ogilvie 1962
REPARTITION: CB-soAlta; Oré-Utah-Wyo
ALBERTA: Parc national des lacs Waterton
CARTE: Booth & Wright 1959 Montana
HABITAT: Bosquets et clairières dans les forêts.

Pinus monticola Dougl.
SOURCES: ALTA, DAO; IBP-CT 1974, Moss 1959 et cartes
REPARTITION: CB-soAlta; Cal-noMont
ALBERTA: Parc national des lacs Waterton
CARTE: Hosie 1969 Can, Little 1971
HABITAT: Vallées humides jusqu'aux pentes dégagées et arides.

Plantago canescens Adams
(*P. septata* Morris)
SOURCES: ALTA, CAN, DAO; Kershaw 1976 et cartes
REPARTITION: Alas-TNO, eCB-soAlta; noMont
ALBERTA: Parc national de Jasper, Whiskey Gap, Fort MacLeod et Coleman
CARTE: Bassett 1967, Bassett 1973, Hultén 1968, Porsild 1964 Can, Univ. of Alta 1975
HABITAT: Collines basses, prairie, ravins et rives.

Plantago maritima L.
SOURCES: DAO; Boivin 1967-72, Packer & Dumais 1972
REPARTITION: Alas-TNO, CB-nAlta, nMan-Lab; les côtes maritimes des E-U, Utah
ALBERTA: Parc national de Wood Buffalo
CARTE: Hulten 1968, Hultén 1971, Bassett 1973
HABITAT: Sol salin.
CONDITIONS: Rare en Ontario.

Plantago patagonica Jacq. var. **spinulosa** (Dcne.) Gray
(*P. spinulosa* Dcne.)
SOURCES: CAN; Bassett 1973, Wallis 1977
REPARTITION: CB-seAlta; Cal, Mo
ALBERTA: Milk River et Sage Creek
CARTE: †
HABITAT: Prairie herbeuse.
CONDITIONS: Rare dans le Missouri.

Plantago septata = P. canescens

Plantago spinulosa = P. patagonica var. **spinulosa**

Platanthera saccata = P. stricta

Platanthera stricta Lindl.
(*Habenaria saccata* Greene, *Platanthera saccata* (Greene) Hult.)
SOURCES: ALTA, CAN, DAO; et cartes
REPARTITION: Alas-sY, CB-soAlta; Cal-Wyo
ALBERTA: Abondante par endroits dans le parc national des lacs Waterton
CARTE: Hultén 1968, Luer 1975, Univ. of Alta 1975
HABITAT: Prairies, marais et forêts humides.
PROTECTION: Un permis d'exportation est requis selon la Convention sur le commerce international des espèces de faune et de flore sauvages menacées d'extinction (Canada 1973, 1975) ratifiée par le Canada et les Etats Unis.

Poa lanata Scribn. & Merr.
SOURCES: CAN, UAC; Packer & Dumais 1972, Porsild 1959 et carte
REPARTITION: Alas-TNO, CB-oAlta-nSask
ALBERTA: Parc national de Banff et Mountain Park
CARTE: Hultén 1968
HABITAT: Prairies.
CONDITIONS: Rare en Saskatchewan.

Poa stenantha Trin.
SOURCES: DAO; Packer 1975-77
REPARTITION: Alas-Y, CB-soAlta; Oré-Colo
ALBERTA: Parc national des lacs Waterton jusqu'à Brocket
CARTE: Hitchcock & Chase 1950 E-U, Hultén 1968
HABITAT: Terrains plats dans les fôrets montagneuses jusqu'aux prairies subalpines.

Polemonium viscosum Nutt.
SOURCES: ALTA, CAN, DAO, UAC; Kershaw 1976, Moss 1959, Ogilvie 1962 et cartes
REPARTITION: CB-oAlta; Nev-NM
ALBERTA: Parc national des lacs Waterton (abondante par endroits), mont North Kootenay et Mountain Park
CARTE: Davidson 1950, Packer & Vitt 1974
HABITAT: Pentes rocheuses meubles en haute montagne.

Polygala paucifolia Willd.
SOURCES: ALTA, DAO, UAC; Packer & Dumais 1972
REPARTITION: neAlta, ecSask-NB; Minn-eE-U
ALBERTA: Fort McMurray (peut-être éliminée)
HABITAT: Sol léger dans les bois.
CONDITIONS: Rare en Saskatchewan. Eliminée dans l'Illinois, menacées d'extinction dans l'Indiana, la Géorgie et la Caroline du Nord et rare dans l'Iowa et le New-Jersey.

Polygonum austinae Greene
SOURCES: ALTA, CAN; Kershaw 1976
REPARTITION: sCB-soAlta; Cal-Wyo
ALBERTA: Parc national des lacs Waterton
HABITAT: Terrain aride.

Polygonum engelmannii Greene
SOURCES: ALTA, CAN, DAO; Kershaw 1976 et carte
REPARTITION: soAlta; Ida-Colo
ALBERTA: Parc national des lacs Waterton et Pincher Creek
CARTE: Booth & Wright 1959 Montana, Univ. of Alta 1975
HABITAT: Berges humides et pentes en montagne.
CONDITIONS: Rare au Canada.

Polygonum minimum Wats.
SOURCES: ALTA, CAN, DAO; et carte
REPARTITION: CB-oAlta; nCal-Colo
ALBERTA: Parcs nationaux de Banff et des lacs Waterton et South Kootenay Pass
CARTE: Booth & Wright 1959 Montana, Univ. of Alta 1975
HABITAT: Terrain aride.

Polypodium hesperium = P. vulgare var. **columbianum**

Polypodium vulgare L. var. **columbianum** Gilbert
(*P. hesperium* Maxon)
SOURCES: ALTA, DAO; Boivin 1967-72 et cartes
REPARTITION: Alas-Y, CB-soAlta; Oré-Mont, dispersé jusqu'en Ariz, Black Hills, DS
ALBERTA: Parc national des lacs Waterton
CARTE: Hultén 1964a, Hultén 1968, Lang 1969, Univ. of Alta 1975
HABITAT: Crevasses et pentes rocheuses.
CONDITIONS: Menacées dans le Colorado, peu commune dans l'Idaho.

Populus angustifolia James
SOURCES: CAN, DAO, UAC; Kershaw 1976 et cartes
REPARTITION: soAlta-soSask; Cal-Tex-oDS
ALBERTA: Fort MacLeod
CARTE: Brayshaw 1965 sAlta, Hosie 1969 Can, Little 1976
HABITAT: Vallées formées par des courd d'eau.
CONDITIONS: Rare au Canada. Menacées d'extinction dans le Texas, rare dans l'Orégon.

Potamogeton obtusifolius Mert. & Koch
SOURCES: CAN, DAO; Moss & Pegg 1963, Packer & Dumais 1972 et carte
REPARTITION: Y-TNO, CB-c&neAlta-Qué, NE; noWash, noMont, noWyo, Kan, Grands Lacs-NJ
ALBERTA: Glenevis et rivière Maybelle
CARTE: Fernald 1932, Haynes 1974, Hultén 1958
HABITAT: Sources froides, cours d'eau et lacs.
CONDITIONS: Rare en Saskatchewan et en Nouvelle-Ecosse. Menacées dans la Pennsylvanie, rare dans le Wyoming et le Kansas.

Potamogeton pusillus L. var. **tenuissimus** Mert. & Koch
SOURCES: DAO; et carte
REPARTITION: Alas-TNO, CB-cAlta-TN; répandu aux E-U
ALBERTA: Fort Saskatchewan
CARTE: Fernald 1932, Haynes 1974
HABITAT: Eaux basiques ou alcalines.
CONDITIONS: Rare en Saskatchewan.

Potamogeton robbinsii Oakes
SOURCES: DAO; Packer & Dumais 1972
REPARTITION: Alas, soCB-cAlta-NB, NE; Cal, Ida-Wyo, Grands Lacs-neE-U
ALBERTA: Glenevis
CARTE: Hultén 1968
HABITAT: Eaux limoneuses.
CONDITIONS: Menacées d'extinction dans l'Indiana, rare dans l'Illinois.

Potamogeton strictifolius Ar. Benn.
SOURCES: DAO; et cartes
REPARTITION: TNO, cAlta-Qué; Utah-Wyo-Neb, Grand Lacs-Nouvelle-Angleterre
ALBERTA: Lacombe
CARTE: Fernald 1932, Haynes 1974, Univ. of Alta 1975. †
HABITAT: Eaux calcaires.
CONDITIONS: Rare dans l'Illinois et le Connecticut.

Potentilla egedii ssp. **yukonensis = P. yukonensis**

Potentilla finitima Kohli & Packer
SOURCES: CAN; et carte
REPARTITION: sAlta-sMan; DN
ALBERTA: Calgary and Hardisty (éliminée)
CARTE: Kohli & Packer 1976
HABITAT: Prairie aride.

Potentilla yukonensis Hult.
(*P. egedii* Wormsk. ssp. *yukonensis* Hult.)
SOURCES: DAO; Packer & Dumais 1972, et cartes
REPARTITION: Alas-NWT, nAlta-Man; Colo
ALBERTA: Fort Vermillion
CARTE: Hultén 1968, Hultén 1971
HABITAT: Le long des ruisseaux et des rivières.

Prenanthes alata (Hook.) D. Dietr.
SOURCES: ALTA, CAN, DAO; Moss & Pegg 1963, Packer & Dumais 1972
REPARTITION: sAlas, oCB-cAlta; Oré
ALBERTA: Collines Swan
CARTE: Hultén 1968
HABITAT: Endroits ombragés et humides.

Prenanthes sagittata (Gray) A. Nels.
SOURCES: ALTA, CAN, DAO; Ogilvie 1962
REPARTITION: soAlta; nIda-oMont
ALBERTA: Abondante par endroits dans le parc national des lacs Waterton
CARTE: Booth & Wright 1959 Montana
HABITAT: Endroits ombragés et humides dans les montagnes.
CONDITIONS: Rare au Canada.

Primula egaliksensis Wormsk.
SOURCES: ALTA, CAN; Moss 1959 et cartes
REPARTITION: Alas-TNO, CB, oAlta, nMan-Qué, TN-Lab; Colo
ALBERTA: Parc national de Jasper et réserve de Clearwater Forest
CARTE: Hultén 1968, Hultén 1971
HABITAT: Terrain humide.
CONDITIONS: Menacées d'extinction dans le Colorado.

Primula stricta Hornem.
SOURCES: CAN; Kershaw 1976, Moss 1959 et carte
REPARTITION: Alas-TNO, CB, oAlta, Man-Qué, Lab
ALBERTA: Parc national de Jasper
CARTE: Hultén 1958, Hultén 1968, Porsild 1964
HABITAT: Terrain humide.

Pteridium aquilinum (L.) Kuhn var. **pubescens** Underw.
SOURCES: CAN, DAO, UAC; Boivin 1967-72, Ogilvie 1962 et carte
REPARTITION: Alas, CB-oAlta, sMan-TN; Cal-Tex-oMont, Black Hills, DS
ALBERTA: Parcs nationaux de Banff et des lacs Waterton et réserve de Crowsnest Forest
CARTE: Hultén 1964a, Hultén 1968, Tryon 1941, Univ. of Alta 1975
HABITAT: Bois et bosquets en montagne.
CONDITIONS: Menacées d'extinction dans le Texas.

Pterospora andromedea Nutt.
SOURCES: ALTA, CAN, DAO, UAC; Boivin 1967-72, Ogilvie 1962 et cartes
REPARTITION: CB-sAlta-soSask, Ont-Qué, IPE; Cal-Tex, DS, Wis-NH
ALBERTA: Parc national des lacs Waterton (abondante par endroits), réserve de Crowsnest Forest, parc provincial des collines Cyprès et Pincher Creek
CARTE: Bakshi 1959, Univ. of Alta 1975, †
HABITAT: Bois de conifères.
CONDITIONS: Rare en Saskatchewan et en Ontario. Menacées d'extinction dans le Wisconsin, le Texas et le New-Hampshire, menacées dans le Michigan et rare dans le Nevada.
PROTECTION: Protegée par la loi dans le Nouveau-Mexique.

Puccinellia hauptiana (Krecz.) Kitagawa
SOURCES: DAO; Packer 1975-77
REPARTITION: Alas-Y, nAlta, Ont
ALBERTA: Fort Fitzgerald
CARTE: Hultén 1968
HABITAT: Endroits humides.

Puccinellia pauciflora (Presl.) Munz
(*Glyceria pauciflora* Presl.)
SOURCES: Packer 1975-77 et carte
REPARTITION: Alas, CB-oAlta; Cal-NM, DS
CARTE: Hitchcock & Chase 1950 E-U, Hultén 1968
HABITAT: Endroits humides.

Pyrola bracteata Hook.
SOURCES: ALTA, UAC; et cartes
REPARTITION: Alas, CB-soAlta; nCal-oMont
ALBERTA: Parc national des lacs Waterton (abondante par endroits) jusqu'a Crowsnest
CARTE: Haber 1976, Univ. of Alta 1975
HABITAT: Bois humides.

Pyrola picta Sm.
SOURCES: ALTA, UAC; Boivin 1967-72 et cartes
REPARTITION: CB-soAlta; Cal-NM-noMont
ALBERTA: Parc national des lacs Waterton
CARTE: Haber 1976, Univ. of Alta 1975
HABITAT: Bois de conifères.
CONDITIONS: Rare dans le Wyoming.

Ranunculus nivalis L.
SOURCES: ALTA; Packer & Dumais 1972 et carte
REPARTITION: Alas-TNO, CB-oAlta, Qué, Lab
ALBERTA: Parc national de Jasper
CARTE: Hultén 1968, Hultén 1971, Porsild 1964, Raup 1947, Univ. of Alta 1975
HABITAT: Lieux alpins.

Ranunculus occidentalis Nutt. var. **brevistylis** Greene
SOURCES: ALTA; Packer 1975-77
REPARTITION: Alas-Y, CB-oAlta; Oré
ALBERTA: Parc procincial de Willmore Wilderness
CARTE: Hultén 1968
HABITAT: Montagnes.

Ranunculus verecundus Robins.
SOURCES: CAN, DAO; Kershaw 1976, Moss 1959
REPARTITION: CB-oAlta; Oré-Mont
ALBERTA: Parc national de Banff
CARTE: Booth & Wright 1959 Montana
HABITAT: Pentes humides près de la limite des arbres.

Rhododendron lapponicum Wahl.
SOURCES: ALTA, CAN, UAC; Kershaw 1976, Packer 1975-77 et cartes
REPARTITION: Alas-TNO CB-oAlta, nMan-Qué, TN-Lab; Wis, Nouvelle-Angleterre
ALBERTA: Réserve de Clearwater Forest, White Goat Wilderness et munt Ram
CARTE: Gillett 1971, Hultén 1958, Hultén 1968, Porsild 1964 Can, Univ. of Alta 1975
HABITAT: Toundra alpine.
CONDITIONS: Menacées d'extinction dans le Wisconsin et le Maine.

Rhynchospora alba (L.) Vahl
SOURCES: Moss 1959, Packer 1975-77 et cartes
REPARTITION: Alas, CB-Sask, Ont-Lab; Cal-Ida, Grands Lacs-eE-U
CARTE: Gale 1944, Hultén 1958, Hultén 1968
HABITAT: Endroits marécageux on sablonneux et humides.
CONDITIONS: Rare en Saskatchewan. Menacées d'extinction dans la Caroline du Nord, rare dans la Californie, l'Illinois et le Tennessee.

Rhynchospora capillacea Torr.
SOURCES: ALTA, DAO, UAC; Moss & Pegg 1963, Packer & Dumais 1972
REPARTITION: cAlta-Man, Ont-NB, NE-TN; DS-Mo-Tenn-Ve
ALBERTA: Heatherdown
CARTE: Gale 1944
HABITAT: Corniches calcaires, marais et sables humides
CONDITIONS: Rare en Saskatchewan et en Nouvelle-Ecosse. Possiblement éliminée dans le Tennessee, menacées d'extinction dans le Dakota du Sud, menacées dans la Pennsylvanie et rare dans l'Iowa et l'Illinois.

Ribes inerme Rydb.
(*R. oxyacanthoides* L. var. *saxosum* (Hook.) Cov.)
SOURCES: ALTA, CAN, UAC; De Vries & Bird 1968, Ogilvie 1962 et carte
REPARTITION: CB-soAlta-NE, Lab; Cal-NM
ALBERTA: Parc national des lacs Waterton et Calgary
CARTE: Booth & Wright 1959 Montana, Univ. of Alta 1975
HABITAT: Forêts en montagne.
PROTECTION: Protégée par la loi dans le Nouveau-Mexique.

Ribes laxiflorum Pursh
SOURCES: ALTA, CAN; Moss 1959
REPARTITION: sAlas, oCE-oAlta; Cal-nIda
ALBERTA: Parc national de Banff et parc provincial de Willmore Wilderness
CARTE: Hultén 1968
HABITAT: Bois humides.
CONDITIONS: Rare dans la Californie.

Ribes oxyacanthoides var. **saxosum = R. inerme**

Ribes viscosissimum Pursh
SOURCES: ALTA, CAN, DAO, UAC; Ogilvie 1962 et carte
REPARTITION: CB-soAlta; Cal-Ariz-Colo
ALBERTA: Parc provincial des lacs Waterton (abondante par endroits), Crownest Pass et Todd Creek
CARTE: Booth & Wright 1959 Montana, Univ. of Alta 1975
HABITAT: Forêts en montagne.
CONDITIONS: Rare dans le Colorado.

Ruppia occidentalis Wats.
(*R. spiralis* L.)
SOURCES: CAN; et cartes
REPARTITION: Alas, CB-cAlta, Sask-Man; Cal, Mont-DN
ALBERTA: Lac Hunt
CARTE: Hultén 1968, Univ. of Alta 1975
HABITAT: Eau saline.

Ruppia spiralis = R. occidentalis

Sagina nodosa (L.) Fenzl.
SOURCES: CAN; Moss 1959 et cartes
REPARTITION: TNO, neAlta, Sask-Lab; lac Supérieur, Nouvelle-Angleterre
ALBERTA: Lac Athabasca
CARTE: Hultén 1958, Hultén 1968, Porsild 1964 Can
HABITAT: Crevasses humides dans le roc et rives sablonneuses.
CONDITIONS: Menacées d'extinction dans le Minnesota, menacées dans le Michigan.

Salix calcicola = S. lanata ssp. **calcicola**

Salix lanata L. ssp. **calcicola** (Fern. & Wieg.) Hult.
(*S. calcicola* Fern. & Wieg.)
SOURCES: CAN, DAO; Kershaw 1976, Moss 1959 et cartes
REPARTITION: TNO, oAlta, neMan-Qué, TN-Lab
ALBERTA: Parc national de Banff (rivière North Saskatchewan)
CARTE: Hultén 1968, Hultén 1971, Porsild 1964
HABITAT: Berges graveleuses des rivières de montagne.
CONDITIONS: Rare en Ontario.

Salix sitchensis Sanson
SOURCES: CAN; Argus 1976 et cartes
REPARTITION: Alas, CB-cAlta; Cal-noMont
ALBERTA: Région de Whitecourt
CARTE: Hultén 1968, Little 1976
HABITAT: Berges des rivières.

Salix stolonifera Cov.
SOURCES: CAN; Kershaw 1976
REPARTITION: Alas-Y, nCB-woAlta
ALBERTA: Parc national de Jasper (collines Opal)
CARTE: Hultén 1968
HABITAT: Lieux alpins.

Salix tyrrellii Raup
SOURCES: CAN
REPARTITION: neAlta-noSask
ALBERTA: Rivière Maybelle
CARTE: Raup 1959
HABITAT: Dunes actives.
CONDITIONS: Rare au Canada.

Sarracenia purpurea L.
SOURCES: ALTA, DAO, UAC; Boivin 1967-72, Moss 1959 et cartes
REPARTITION: TNO, CB-neAlta-Lab; Grands Lacs-eE-U
ALBERTA: Fort McMurray jusqu'a Fort Chipewyan
CARTE: Cody & Talbot 1973 oCan, Krajina 1968, McDaniel 1971
HABITAT: Peat bogs.
CONDITIONS: Menacées d'extinction dans la Géorgie et la Caroline du Sud, menacées dans la Louisiane et rare dans l'Illinois.
PROTECTION: Protégée par la loi dans le Wisconsin et l'Etat de New-York.

Saussurea americana D. C. Eat.
SOURCES: ALTA; Packer 1975–77 et carte
REPARTITION: Alas–Y, CB–soAlta; nCal–Ida
ALBERTA: Parc national des lacs Waterton
CARTE: Hultén 1968, Univ. of Alta 197
HABITAT: Prairies humides et pentes découvertes.
CONDITIONS: Menaceés d'extinction dans la Californie.

Saxifraga arguta D. Don
(*S. odontoloma* Piper)
SOURCES: ALTA, CAN
REPARTITION: sCB–soAlta; Cal–NM
ALBERTA: Parc national des lacs Waterton jusqu'à Coleman
CARTE: Booth & Wright 1959 Montana
HABITAT: Endroits humides.
CONDITIONS: Rare dans l'Arizona.
PROTECTION: Protégée par la loi dans le Nouveau-Mexique.

Saxifraga debilis Engelm.
SOURCES: CAN, DAO; Kershaw 1976
REPARTITION: sCB–soAlta; Cal–Ariz–Colo
ALBERTA: Parcs nationaux de Banff, de Jasper et des lacs Waterton
CARTE: Booth & Wright 1959 Montana
HABITAT: Falaises, crevasses rocheuses et talus humides.

Saxifraga flagellaris Willd.
SOURCES: ALTA, CAN, DAO; Packer & Dumais 1972, Porsild 1959 et cartes
REPARTITION: Alas–TNO, nCB–oAlta; disj sMont–Ariz–NM
ALBERTA: Parc national de Banff, parc provincial de Willmore Wilderness et Cadomin
CARTE: Hultén 1958, Hultén 1964b, Hultén 1968, Packer & Vitt 1974, Porsild 1964 Can, Univ. of Alta 1975
HABITAT: Eboulis en montagne et rochers humides.
PROTECTION: Protégée par la loi dans le Nouveau-Mexique.

Saxifraga mertensiana Bong.
SOURCES: ALTA, CAN, DAO, UAC; et carte
REPARTITION: sAlas, CB–soAlta; Cal–noMont
ALBERTA: Parc national des lacs Waterton (abondante par endroits) jusqu'à Crowsnest Pass
CARTE: Booth & Wright 1959 Montana, Hultén 1968, Univ. of Alta 1975
HABITAT: Endroits humides dans les montagnes.

Saxifraga odontoloma = **S. arguta**

Saxifraga oregana Howell var. **subapetala** (E. Nels.) C. L. Hitchc.
(*S. subapetala* E. Nels.)
SOURCES: CAN; Kershaw 1976
REPARTITION: soAlta; cMont–Wyo
ALBERTA: Coleman
HABITAT: Marais, berges des cours d'eau et prairies humides.
CONDITIONS: Rare au Canada.

Saxifraga subapetala = **S. oregana** var. **subapetala**

Schedonnardus paniculatus (Nutt.) Trel.
SOURCES: ALTA, CAN, DAO; Moss 1959
REPARTITION: seAlta–soMan; Ariz–Le–Ill–Minn
ALBERTA: Medicine Hat jusqu'à Manyberries
CARTE: Hitchcock & Chase 1950 E–U, †
HABITAT: Plaines et endroits désertiques.
CONDITIONS: Eliminée dans l'Illinois, menacées d'extinction dans le Minnesota et rare dans l'Iowa.

Scirpus atrovirens var. **pallidus** = **S. pallidus**

Scirpus clintonii Gray
SOURCES: ALTA, CAN, DAO; Packer 1975–77
REPARTITION: cAlta–Sask, Ont–NB; Grands Lacs–neE–U
ALBERTA: Lac Buck, lac Sandy et Cherhill
HABITAT: Berges, corniches et bois.
CONDITIONS: Rare en Saskatchewan et en Ontario.

Scirpus fluviatilis (Torr.) Gray
SOURCES: ALTA, CAN, DAO; Moss 1959
REPARTITION: cAlta–Man, Qué; répandu aux E–U
ALBERTA: Nisku
HABITAT: Rives et marécages.

Scirpus pallidus (Britt.) Fern.
(*S. atrovirens* Willd. var. *pallidus* Britt.)
SOURCES: ALTA, CAN; Kershaw 1976, Moss 1959
REPARTITION: c&seAlta–seSask; Oré–Tex–Mo–Minn
ALBERTA: Fort Saskatchewan et Medicine Hat
CARTE: †
HABITAT: Terrain bas.
CONDITIONS: Rare au Canada.

Selaginella wallacei Hier.
SOURCES: ALTA, DAO; Boivin 1967–72 et carte
REPARTITION: CB–soAlta; Cal–oMont
ALBERTA: Parc national des lacs Waterton
CARTE: Taylor 1970 Pacifique NO, Tryon 1955
HABITAT: Falaises et pentes rocheuses.

Senecio conterminus Greenm.
SOURCES: ALTA, CAN, DAO, UAC; et cartes
REPARTITION: Alas–Y, oAlta; noMont
ALBERTA: Abondante par endroits depuis le parc national des lacs Waterton jusqu'à Little Elbow Pass
CARTE: Hultén 1968, Packer 1972, Porsild 1966 Can, Univ. of Alta 1975
HABITAT: Endroits à découvert dans les montagnes.
CONDITIONS: Rare dans le Montana.

Senecio foetidus Howell var. **foetidus**
SOURCES: CAN, DAO; Kershaw 1976, Packer & Dumais 1972
REPARTITION: sCB–soAlta; neOré–Ida
ALBERTA: Milk River
CARTE: Barkley 1960
HABITAT: Le long des ruisseaux.

Senecio foetidus var. **hydrophiloides** = **S. hydrophiloides**

Senecio hydrophiloides Rydb.
(*S. foetidus* Howell var. *hydrophiloides* (Rydb.) Barkley)
SOURCES: ALTA, CAN; Kershaw 1976 et carte
REPARTITION: soAlta; Cal-Colo, DS
ALBERTA: Parc national des lacs Waterton jusqu'au mont North Kootenay
CARTE: Barkley 1960
HABITAT: Endroits humides dans des bois clairs et bas-fonds dans la prairie au pied des collines basses.
CONDITIONS: Rare au Canada. Rare dans le Colorado.

Senecio megacephalus Nutt.
SOURCES: CAN, DAO, UAC; Kershaw 1976, Ogilvie 1962 et carte
REPARTITION: seCB-soAlta; nIda-Mont
ALBERTA: Parc national des lacs Waterton (abondante par endroits) et Castle River
CARTE: Booth & Wright 1959 Montana, Univ. of Alta 1975
HABITAT: Endroits découverts en montagne.
CONDITIONS: Rare dan le Wyoming.

Silene douglasii Hook.
SOURCES: Kuijt 1973 et carte
REPARTITION: CB-soAlta; Cal-Utah-oMont
ALBERTA: Parc national des lacs Waterton
CARTE: Booth & Wright 1959 Montana, Hultén 1968
HABITAT: Pentes dans les montagnes.

Silene involucrata = Melandrium affine

Sparganium glomeratum Laest.
SOURCES: ALTA, CAN, DAO; Kershaw 1976, Packer & Dumais 1972 et carte
REPARTITION: cAlta, Qué; Minn
ALBERTA: Glenevis
CARTE: Hultén 1964a, Moss & Pegg 1963 cAlta
HABITAT: Etangs peu profonds.
CONDITIONS: Rare au Canada. Menacées d'extinction dans le Minnesota.

Spergularia marina (L.) Griseb.
SOURCES: CAN, DAO; Wallis 1977 et carte
REPARTITION: TNO, CB-ne&seAlta-NE; Cal-Tex-DN, Côtes ne et du golfe
ALBERTA: Parc national de Wood Buffalo et Suffield
CARTE: Rossbach 1940
HABITAT: Sol salin.

Spiraea densiflora Nutt. var. **splendens** (Baumann) C. L. Hitchc.
SOURCES: ALTA, CAN, DAO; Ogilvie 1962, Packer 1975-77 et carte
REPARTITION: soAlta: Cal-oMont
ALBERTA: Abondante par endroits dans le parc national des lacs Waterton
CARTE: Univ. of Alta 1975
HABITAT: Bosquets et prairies humidies dans les montagnes.
CONDITIONS: Rare au Canada.

Stellaria americana (Porter) Standl.
SOURCES: DAO; Kershaw 1976, Ogilvie 1962 et carte
REPARTITION: soAlta; scMont
ALBERTA: Parc national des lacs Waterton
CARTE: Booth & Wright 1959 Montana, Univ. of Alta 1975
HABITAT: Pentes alpines rocheuses.
CONDITIONS: Rare au Canada.

Stellaria arenicola Raup
SOURCES: CAN
REPARTITION: neAlta-noSask
ALBERTA: Rivière Maybelle
CARTE: Porsild 1963
HABITAT: Dunes actives.
CONDITIONS: Rare au Canada.

Stellaria nitens Nutt.
SOURCES: Kuijt 1973
REPARTITION: CB-soAlta; Cal-Utah, oMont
ALBERTA: Parc national des lacs Waterton
CARTE: Booth & Wright 1959 Montana
HABITAT: Rives des cours d'eau et flancs de coteau herbeux.

Stellaria obtusa Eng.
SOURCES: CAN, DAO, UAC; Boivin 1967-72, Kershaw 1976, Packer 1975-77
REPARTITION: sAlas, seCB-soAlta; Cal-Colo
ALBERTA: Parc national des lacs Waterton et Blairmore
CARTE: Booth & Wright 1959 Montana
HABITAT: Prairies humides et le long des cours d'eau.
CONDITIONS: Rare dans le Colorado.

Stellaria umbellata Turcz.
SOURCES: CAN; Kershaw 1976, Ogilvie 1962, Packer 1975-77 et cartes
REPARTITION: Alas, oAlta; disj Oré-Cal, Mont-Colo
ALBERTA: Parc national de Banff
CARTE: Booth & Wright 1959 Montana, Hultén 1968, Univ. of Alta 1975
HABITAT: Endroits humides dans les montagnes.
CONDITIONS: Rare au Canada.

Stephanomeria runcinata Nutt.
(*S. tenuifolia* auct.)
SOURCES: ALTA, CAN, DAO, UAC; Boivin 1967-72, Kershaw 1976, Moss 1959
REPARTITION: sAlta-soSask; nColo-noNeb-DN
ALBERTA: Parc provincial Dinosaur, rivière Oldman, Pincher Creek et rivière St. Mary's
CARTE: Booth & Wright 1959 Montana
HABITAT: Collines et plaines arides.
CONDITIONS: Rare au Canada. Menacées d'extinction dans le Dakota du Nord, rare dans le Colorado.

Stephanomeria tenuifolia = S. runcinata

Streptopus streptopoides (Ledeb.) Frye & Rigg
SOURCES: CAN, DAO; Moss & Pegg 1963, Packer & Dumais 1972
REPARTITION: Alas, CB-cAlta; Wash-nIda
ALBERTA: Collines Swan
CARTE: Hultén 1968
HABITAT: Bois de conifères.

Suckleya suckleyana (Torr.) Rydb.
SOURCES: DAO; Boivin 1967-72, Wallis 1977
REPARTITION: sAlta-Sask; Colo
ALBERTA: Manyberries et Craddoch
CARTE: Booth & Wright 1959 Montana . †
HABITAT: Sur le bord des terrains marécageux et des routes.

Suksdorfia ranunculifolia (Hook.) Engl.
(*Hemieva ranunculifolia* (Hook.) Raf.)
SOURCES: ALTA, CAN; Moss 1959, Ogilvie 1962, Packer 1975-77
REPARTITION: CB-soAlta; Cal-nMont
ALBERTA: Parc national des lacs Waterton
HABITAT: Rochers humides dans les montagnes.
CONDITIONS: Rare dans l'Orégon.

Suksdorfia violacea Gray
SOURCES: ALTA, CAN; Boivin 1967-72, Ogilvie 1962, Packer 1975-77 et carte
REPARTITION: CB-soAlta; Oré-noMont
ALBERTA: Parc national des lacs Waterton jusqu'au mont North Kootenay
CARTE: Booth & Wright 1959 Montana, Univ. of Alta 1975
HABITAT: Rochers humides près des cours d'eau et des chutes.
CONDITIONS: Rare dans l'Orégon, peu commune dans l'Etat de Washington.

Tanacetum huronense Nutt. var. **bifarium** Fern.
(*Chrysanthemum bipinnatum* L. ssp. *huronense* (Nutt.) Breitung
SOURCES: CAN, DAO; Moss 1959 Raup 1936 et carte
REPARTITION: Alas-TNO, CB, neAlta, Man-Qué
ALBERTA: Lac Athabasca et rivière Maybelle
CARTE: Hultén 1968, Hultén 1971
HABITAT: Dunes actives.
CONDITIONS: Rare en Ontario. Menacées d'extinction dans le Wisconsin et le Maine, menacées dans le Michigan.

Taxus brevifolia Nutt.
SOURCES: ALTA, CAN, UAC; IBP-CT 1974, Kuijt 1973, Moss 1959 et cartes
REPARTITION: Alas, CB-soAlta; nCal, Ida-noMont
ALBERTA: Parc national des lacs Waterton
CARTE: Hosie 1969 Can, Hultén 1968, Little 1971
HABITAT: Forêts humides.

Telesonix jamesii (Torr.) Raf. var. **heucheriformis** (Rydb.) Bacigalupi
SOURCES: ALTA, CAN, DAO; Kershaw 1976 et cartes
REPARTITION: oAlta; disj Mont, Wyo-Colo, Nev, DS
ALBERTA: Parc national de Jasper, Nordegg et Cadomin
CARTE: Packer & Vitt 1974, Univ. of Alta 1975
HABITAT: Crevasses humides dans les rochers et pentes d'éboulis.
CONDITIONS: Rare au Canada. Rare dans le Colorado.

Thelesperma marginatum Rydb.
(*T. subnudum* auct.)
SOURCES: CAN, DAO; Boivin 1967, Boivin 1967-72, Kershaw 1976, Packer & Dumais 1972
REPARTITION: seAlta; oMont-soWyo
ALBERTA: Medicine Hat
HABITAT: Endroits arides à découvert.
CONDITIONS: Rare au Canada.

Thelesperma subnudum = T. marginatum

Thelypteris phegopteris = Phegopteris polypodioides

Thellungiella salsuginea (Pall.) O. E. Schulz
SOURCES: CAN, DAO; Kershaw 1976
REPARTITION: TNO-Y, CB-neAlta-Man
ALBERTA: Parc national de Wood Buffalo, Fort Vermillion et St. Albert
HABITAT: Sols alcalins sablonneux.

Thuja plicata D. Don
SOURCES: ALTA, CAN, DAO, UAC; Boivin 1967-72, IBP-CT 1974, Moss 1959, Ogilvie 1962 et cartes
REPARTITION: seAlas, CB-o&cAlta; nCal-noMont
ALBERTA: Parcs nationaux de Banff et de Jasper, réserve de Crowsnest Forest, Coleman et Fort Saskatchewan
CARTE: Hosie 1969 Can, Hultén 1968, Little 1971
HABITAT: En forêt, dans les sols humides et même marécageux.

Tiarella trifoliata L.
SOURCES: ALTA, CAN, DAO, UAC; Boivin 1967-72, IBP-CT 1974, Moss 1959 et cartes
REPARTITION: sAlas, CB, cAlta; Oré-Mont
ALBERTA: Abondante par endroits de Whitecourt aux collines Swan
CARTE: Hultén 1968, Lakela 1937, Moss & Pegg 1963 cAlta, Univ. of Alta 1975
HABITAT: Bois humides.

Tofieldia coccinea Rich.
SOURCES: CAN; Kershaw 1976, Packer & Dumais 1972 et cartes
REPARTITION: Alas-TNO, CB-nAlta
ALBERTA: Rivière Athabasca
CARTE: Hultén 1968, Porsild 1964
HABITAT: Endroits arides et rocheux.

Townsendia condensata D. C. Eat.
SOURCES: ALTA, CAN; IBP-CT 1974, Kershaw 1976, Kuijt 1973, Packer & Dumais 1972
REPARTITION: soAlta; Ida-noMont-noWyo
ALBERTA: Parc national des lacs Waterton
CARTE: Beaman 1957
HABITAT: Crêtes arides.
CONDITIONS: Rare au Canada. Menacees d'extinction dans le Wyoming, menacées dans l'Idaho et rare dans le Montana.

Trillium ovatum Pursh
SOURCES: ALTA; Moss 1959, Scotter 1976 et carte
REPARTITION: sCB-soAlta; Cal-Colo
ALBERTA: Parc national des lacs Waterton
CARTE: Gates 1917
HABITAT: Bois humides.
CONDITIONS: Menacées d'extinction dans le Colorado et rare dans le Wyoming.

Trisetum canescens Buckl.
SOURCES: Packer 1975-77
REPARTITION: sCB-soAlta; Cal-oMont
CARTE: Hitchcock & Chase 1950 E-U
HABITAT: Endroits humides dans les montagnes.

Trisetum cernuum Trin.
SOURCES: CAN; Packer 1975-77
REPARTITION: Alas, CB-soAlta; nCal-oMont
ALBERTA: Parc national des lacs Waterton et Castlemount
CARTE: Hitchcock & Chase 1950 E-U, Hultén 1968
HABITAT: Bois humides.

Trisetum montanum Vasey
SOURCES: Kershaw 1976, Packer 1975-77
REPARTITION: soAlta; Colo-NM-Ariz
ALBERTA: Parc national des lacs Waterton
CONDITIONS: Rare au Canada. Rare dans le Arizona.

Trisetum wolfii Vasey
SOURCES: DAO
REPARTITION: soAlta-soSask; Cal-NM-Mont
ALBERTA: Rivière Carbondale
CARTE: Hitchcock & Chase 1950 E-U
HABITAT: Lieux humides.
CONDITIONS: Rare au Canada.

Utricularia cornuta Michx.
SOURCES: Kershaw 1976, Packer & Dumais 1972 et carte
REPARTITION: neAlta-noSask, sMan-Lab; Grands Lacs-eE-U
ALBERTA: Région du lac Athabasca
CARTE: Rondo 1972, McLauhglin 1932, Univ. of Alta 1975
HABITAT: Marais.
CONDITIONS: Menacées d'extinction dans l'Indiana, menacées dans le Rhode-Island et rare dans l'Illinois.

Viola selkirkii Pursh
SOURCES: CAN, DAO; Wallis 1977 et carte
REPARTITION: Alas-TNO, CB-c&oAlta-NB, NE-Lab; Colo-NM, Grands Lacs-neE-U
ALBERTA: Parc national de Jasper (mont Edith Cavell) et Glenevis
CARTE: Harms 1973 Sask, Hultén 1968, Hultén 1971, Russell 1956
HABITAT: Bois frais.
CONDITIONS: Rare en Saskatchewan. Rare dans le Colorado et le Connecticut.

Woodsia glabella R. Br.
SOURCES: ALTA, CAN; et cartes
REPARTITION: Alas-TNO, CB-oAlta-NB, NE-Lab; nMinn-NY-Nouvelle-Angleterre
ALBERTA: Parcs nationaux de Banff et de Jasper et réserve de Kananaskis Forest
CARTE: Hultén 1964a, Hultén 1968, Porsild 1964 Can, Univ. of Alta 1975
HABITAT: Rochers calcaires humides et falaises ombragées.
CONDITIONS: Rare en Saskatchewan, en Ontario et en Nouvelle-Ecosse. Menacées d'extinction dans le Minnesota, le Vermont et le Maine.
PROTECTION: Protégée par la loi dans l'Etat de New-York et le Vermont.

Woodsia ilvensis R. Br.
SOURCES: ALTA, CAN, DAO; et cartes
REPARTITION: Alas-TNO, CB-neAlta-NB, NE-Lab; oGrands Lacs-neE-U, les Appalaches
ALBERTA: Lac Athabasca et Fort Fitzgerald
CARTE: Hultén 1964a, Hultén 1968, Porsild 1964 Can, Raup 1947 Can, Univ. of Alta 1975
HABITAT: Crevasses dans les rochers.
CONDITIONS: Menacées d'extinction dans la Caroline du Nord, menacées dans le Rhode-Island et rare dans l'Iowa et l'Illinois.
PROTECTION: Protégée par la loi dans l'Etat de New-York et le Vermont.

Yucca glauca Nutt.
SOURCES: ALTA, DAO, UAC; IBP-CT 1974, Kershaw 1976, Moss 1959, Weir 1974
REPARTITION: seAlta; s to Mont-Ariz-Tex-Iowa
ALBERTA: Onefour jusqu'a Manyberries
CARTE: Cheney 1931. †
HABITAT: Pentes arides.
CONDITIONS: Rare au Canada. Rare dans l'Iowa.

BIBLIOGRAPHIE

ALTA. Herbarium, University of Alberta, Edmonton, Alberta.

Argus, G. W. 1976. Personal communication.

Argus, G. W. 1977. Canada pp. 17–29. In G. T. Prance and T. S. Elias. Extinction is Forever. New York Botanical Garden. New York.

Argus, G. W., and D. J. White. 1977. The rare vascular plants of Ontario. Syllogeus 14.

Bakshi, T. S. 1959. Ecology and morphology of *Pterospora andromedea*. Botanical Gazette 120:203–217.

Barkley, T. M. 1960. A revision of *Senecio integerrimus* Nuttall and allied species. Leaflets of Western Botany 9:97–116.

Barneby, R. C. 1952. Revision of the North American species of *Oxytropis* DC. Proceedings of the California Academy of Sciences 27:177–309.

Barneby, R. C. 1964. Atlas of North American *Astragalus*. Memoirs of the New York Botanical Garden 13. 2 parts.

Bassett, I. J. 1967. Taxonomy of *Plantago* L. in North America: sections Holopsyllium Pilger, Palaeopsyllium Pilger and Lamprosantha Decne. Canadian Journal of Botany 45:565–577.

Bassett, I. J. 1973. The Plantains of Canada. Research Branch, Canada Department of Agriculture. Monograph 7.

Beaman, J. H. 1957. The systematics and evolution of *Townsendia* (Compositae). Contributions from the Gray Herbarium 183:1–151.

Beetle, A. A. 1960. A study of sagebrush. The section Tridentatae of *Artemisia*. University of Wyoming Agricultural Experiment Station. Bulletin 368.

Boivin, B. 1967. Enumération des plantes du Canada. Provancheria 6. Université Laval, Québec.

Boivin, B. 1967–1972. Flora of the Prairie Provinces. 3 parts. Provancheria 2, 3 and 4. Université Laval, Québec.

Booth, W. E., and J. C. Wright. 1959. Flora of Montana. Part II. Montana State University. Bozeman.

Boyle, W. S. 1945. A cytotaxonomic study of the North American species of *Melica*. Madrono 8:1–26.

Bowden, W. M. 1957. Cytotaxonomy of section Psammelymus of the genus *Elymus*. Canadian Journal of Botany 35:951–993.

Bowden, W. M. 1962. Cytotaxonomy of the native and adventive species of *Hordeum, Eremopyrum, Secale, Sitanion* and *Triticum* in Canada. Canadian Journal of Botany 40:1675–1711.

Brayshaw, T. C. 1965. Native poplars of southern Alberta and their hybrids. Department of Forestry No. 1109. Queens Printer.

Breitung, A. J. 1957. Annotated catalogue of the vascular flora of Saskatchewan. American Midland Naturalist 58:1–72.

Breitung, A. J. 1959. Supplement to 'Flora of Saskatchewan'. American Midland Naturalist 61:510–512.

CAN. National Herbarium of Canada, The National Museum of Natural Sciences, Ottawa.

Canada. 1973. Convention on international trade in endangered species of wild fauna and flora. Canadian Wildlife Service Reprint. September.

Canada. 1975. Amendments to the Export and Import Act. Canada Gazette Part II, 109(14).

Cash, H. J. 1954. The genus *Lomatium* (Umbelliferae) in Montana. Proceedings of the Montana Acadamy of Sciences 14:11–21.

Cheney, R. H. 1931. Geographic and taxonomic distribution of american plant arrow poisons. American Journal of Botany 18:136–145.

Clausen, R. T. 1938. A monograph of the Ophioglossaceae. Memoirs of the Torrey Botanical Club 19(2):1–177.

Cody, W. J. 1971. A phytogeographic study of the floras of the continental Northwest Territories and Yukon. Naturaliste canadien 98:145–158.

Cody, W. J., B. Boivin, and G. W. Scotter. 1974. *Loiseleuria procumbens* (L.) Desv., alpine azalea in Alberta. Canadian Field-Naturalist 88:229–230.

Cody, W. J., and S. S. Talbot. 1973. The pitcher plant *Sarracenia purpurea* L. in the northwestern part of its range. Canadian Field-Naturalist 87:318–320.

Collins, J. L., H. R. DeSelm, A. M. Evans, R. Kral, and B. E. Wofford. 1976. Tennessee Rare Plants. Tennessee Committee for Rare Plants. Unpublished.

Constance, L. 1941. The genus *Nemophila* Nutt. University of California Publications in Botany 19:341–398.

Constance, L. 1942. The genus *Hydrophyllum* L. American Midland Naturalist 27:710–731.

Constance, L., and R. H. Shan. 1948. The genus *Osmorhiza* (Umbelliferae), a study in geographic affinities. University of California Publications in Botany 23:111–156.

DAO. Department of Agriculture, Vascular Plant Herbarium, Biosystematics Research Institute, Ottawa.

Daubenmire, R. F. 1942. An ecological study of the vegetation of southeastern Washington and adjacent Idaho. Ecological Monographs 12:53–79.

Davidson, J. F. 1950. The genus *Polemonium* (Tournefort) L. University of California Publications in Botany 23:209–282.

De Vries, B. 1966. *Iris missouriensis* Nutt. in southwestern Alberta and in central and northern British Columbia. Canadian Field-Naturalist 80:158–160.

De Vries, B., and C. D. Bird. 1968. Additions to the vascular flora of the Cypress Hills, Alberta. Blue Jay 26:98–100.

Dore, W. G. 1975. Letter dated 22 May.

Dorn, R. D. 1977. Flora of Montana. Unpublished.

Dunn, D. B. 1957. A revision of the *Lupinus arbustus* complex of the Laxiflori. Madrono 14:54–73.

Dunn, D. B. 1965. The inter-relationships of the Alaskan lupines. Madrono 8:1–32.

Dunn, D. B., and J. M. Gillett. 1966. The Lupines of Canada and Alaska. Research Branch, Canada Department of Agriculture. Monograph 2.

Ebinger, J. E. 1962. The varieties of *Luzula acuminata*. Rhodora 64:74–83.

Ellison, W. L. 1964. A systematic study of the genus *Bahia* (Compositae). Rhodora 66:67–86, 177–215, 281–311.

Fernald, M. L. 1932. The linear-leaved North American species of *Potamogeton*, section Axillares. Memoirs of the Gray Herbarium 3:1–183.

Fernald, M. L. 1933. Recent Discoveries in the Newfoundland flora. Rhodora 35:1–403 (interrupted).

Fernald, M. L. 1935. Critical plants of the upper Great Lakes region of Ontario and Michigan. Rhodora 37:197–262.

Fernald, M. L. 1950. Gray's Manual of Botany. D. Van Nostrand Company, New York. 8th edition.

Frankton, C., and I. J. Bassett. 1970. The genus *Atriplex* (Chenopodiaceae) in Canada. II. Four native western annuals: *A. argentea, A. truncata, A. powellii* and *A. dioica*. Canadian Journal of Botany 48:981–989.

Fuller, W. A. 1973. The Conservation of Terrestrial Communities Programme in Canada. Syesis 6:11–16.

Gale, S. 1944. *Rhynchospora*, section Eurhynchospora in Canada, the United States and the West Indies. Rhodora 46:89–134, 159–197, 207–278.

Gates, R. R. 1917. A systematic study of the North American genus *Trillium*, its variability and its relationship to *Paris* and *Medeola*. Annals of the Missouri Botanical Garden 4:43–92.

Gillett, G. W. 1960. A systematic treatment of the *Phacelia franklinii* group. Rhodora 62:205–222.

Gillett, G. W. 1962. Evolutionary relationships of *Phacelia linearis*. Brittonia 14:231–236.

Gillett, J.M. 1957. A revision of the North American species of *Gentianella* Moench. Annals of the Missouri Botanical Garden 44:195–269.

Gillett, J. M. 1963. The Gentians of Canada, Alaska and Greenland. Research Branch, Canada Department of Agriculture. Publication 1180.

Gillett, J. M. 1971. The native rhododendrons of Canada and Alaska. Greenhouse-Garden-Grass 10:35–45.

Gillett, J. M. 1976. The St. John's Worts of Canada. Unpublished.

Griffiths, G. C. D., and R. P. Pharis. 1976. The Western Swan Hills – Alberta's Forgotten Wilderness. Alberta Wilderness Association and the Edmonton Chapter of the National and Provincial Parks Association of Canada. Calgary and Edmonton.

Haber, E. 1976. Unpublished maps. National Museum of Natural Sciences, Ottawa.

Harms, V.L. 1973. Violets of Saskatchewan. Blue Jay 31:105–112.

Haynes, R. R. 1974. A revision of North American *Potamogeton* subsection Pusilli (Potamogetonaceae). Rhodora 76:564–649.

Helton, N., D. Wiens, and B. Barlow. 1972. High polyploidy and the origin of *Balsamorhiza macrophylla* (Compositae). Madrono 21:526–535.

Hitchcock, A. S., and A. Chase. 1950. Manual of the grasses of the United States. United States Department of Agriculture. Miscellaneous Publication 200. 2nd edition.

Hitchcock, C. L. , A. Cronquist, M. Ownbey, and J. W. Thompson. 1955–1969. Vascular Plants of the Pacific Northwest. University of Washington Press, Seattle. 5 parts.

Hopkins, M. 1937. *Arabis* in eastern and central North America. Rhodora 39:63–98, 106–148, 155–186.

Hosie, R.C. 1969. Native Trees of Canada. Canadian Forestry Service, Ottawa. 7th edition.

Hu, Shiu-Ying. 1954–1956. A monograph of the genus *Philadelphus*. Journal of the Arnold Arboretum 35:275–333; 36:52–109; 37:15–90.

Hudson, J. H. 1972. The carices of the Sunshine region. Unpublished.

Hudson, J. H. 1977. *Carex* of Saskatchewan. Bison Publishing House. Saskatoon.

Hultén, E. 1958. The amphi-Atlantic plants and their phytogeographical connections. Kungliga Svenska Vetenskapsakademiens Handlingar 7:1–340.

Hultén, E. 1964a. The circumpolar plants. I. Vascular cryptogams, conifers, monocotyledons. Kungliga Svenska Vetenskapsakademiens Handlingar 8:1–275.

Hultén, E. 1964b. The *Saxifraga flagellaris* complex. Svensk Botanisk Tidskrift 58:81–104.

Hultén, E. 1968. Flora of Alaska. Stanford University Press, Stanford.

Hultén. E. 1971. The circumpolar plants. II. Dicotyledons. Kungliga Svenska Vetenskapsakademiens Handlingar 13:1–463.

IBP-CT (International Biological Program-Conservation of Terrestrial Communities). 1974. Check Sheets for Alberta. National Research Council Library, Ottawa.

Jones, Q. 1951. A cytotaxonomic study of the genus *Disporum* in North America. Contributions from the Gray Herbarium 173:1–40.

Johnson, H., and B. Hallworth. 1965. Further discoveries of sand verbena in Alberta. Blue Jay 33:13–15.

Kartesz, J. T., and R. Kartesz. 1977. The Biota of North America. Part 1: Vascular Plants. Volume I: Rare Plants. Biota of North America Committee, Pittsburgh.

Keck, D. D. 1945. Studies in *Penstemon* .VIII. A cytotaxonomic account of the section Spermunculus. American Midland Naturalist 33:128–206

Kershaw, L. 1976. A phytogeographical survey of rare, endangered and extinct vascular plants in the Canadian flora. M. Sc. thesis, University of Waterloo, Ontario. Unpublished.

Kershaw, L., and J.K. Morton. 1976. Rare and potentially endangered species in the Canadian flora – a preliminary list of vascular plants. The Bulletin of the Canadian Botanical Association 9:26–30

Kohli, B., and J. G. Packer. 1976. A contribution to the taxonomy of the *Potentilla pensylvanica* complex in North America. Canadian Journal of Botany 54:706–719.

Kondo, K. 1972. A comparison of variability in *Utricularia cornuta* and *U. juncea*. American Journal of Botany 59:23–37.

Koyama, T., and S. Kawano. 1946. Critical taxa of grasses with North American and eastern Asiatic distribution. Canadian Journal of Botany 42:859–884.

Krajina, V. J. 1968. Sarraceniaceae, a new family for British Columbia. Syesis 1:121–124.

Kuijt, J. 1973. New plant records in Waterton Lakes National Park, Alberta. Canadian Field–Naturalist 87:67–69.

Kuijt, J., and A. Trofymow. 1975. Range extensions of two rare Alberta shrubs. Blue Jay 33:96–98.

Lakela, O. 1937. A monograph of the genus *Tiarella* in North America. American Journal of Botany 24:344–351.

Lang, F. A. 1969. A new name for a species of *Polypodium* from northwestern North America. Madrono 20:53–60.

Lewis, H., and J. Szweykowski. 1964. The genus *Gayophytum* (Onagraceae). Brittonia 16:343–391.

Little, E. L., Jr. 1971. Atlas of United States Trees. Volume 1. Conifers and Important Hardwoods. United States Department of Agriculture, Forest Service. Miscellaneous Publication 1146.

Little, E. L., Jr. 1976. Atlas of United States Trees. Volume 3. Minor Western Hardwoods. United States Department of Agriculture, Forest Service. Miscellaneous Publication 1314.

Löve, D. 1969. *Papaver* at high altitudes in the Rocky Mountains. Brittonia 21:1–10.

Löve, D., and N. J. Freedman. 1956. A plant collection from southwestern Yukon. Botaniska Notiser 109:153–211.

Luer, C. A. 1975. The Native Orchids of the United States and Canada. New York Botanical Garden, Ipswich.

Maguire, B. 1943. A monograph of the genus *Arnica*. Brittonia 4:386–510.

Maher, R. V., G. W. Argus, D. J. White, and V. L. Harms. 1978. The rare vascular plants of Saskatchewan. Syllogeus. In press.

Maher, R. V., D. J. White, G. W. Argus, and P. A. Keddy. 1978. The rare vascular plants of Nova Scotia. Syllogeus. In press.

McDaniel, S. 1971. The genus *Sarracenia* (Sarraceniaceae). Bulletin of the Tall Timbers Research Station 9:1–36.

McGregor, R. L. 1977. Rare native vascular plants of Kansas. State Biological Survey of Kansas, Technical Bulletin No. 5.

McGregor, R. L., and T. M. Barkley, eds. 1977. Atlas of the Flora of the Great Plains. The Iowa State University Press. Ames.

McLaughlin, W. T. 1932. Atlantic coastal plain plants in the sand barrens of northwestern Wisconsin. Ecological Monographs 2:335–383.

McVaugh, R. 1936. Studies in the taxonomy and distribution of the eastern North American species of *Lobelia*. Rhodora 38:241–263, 276–298, 305–329,346–362.

McVaugh, R. 1941. A monograph on the genus *Downingia*. Memoirs of the Torrey Botanical Club 19:1–57.

Meusel, H., E. Jager, and E. Weinert. 1965. Vergleichende chorologie der Zentraleuropaischen Flora. Karten. Jena.

Moore, R. J., and C. Frankton. 1967. Cytotaxonomy of the foliose thistles (*Cirsium* spp. aff. *C. foliosum*) of western North America. Canadian Journal of Botany 45:1733–1749.

Moore, R. J., and C. Frankton. 1974. The Thistles of Canada. Research Branch, Canada Department of Agriculture. Monograph 10.

Moss, E. H. 1944. *Lilaea scillioides* in southeastern Alberta. Rhodora 46:205–206.

Moss, E. H. 1959. Flora of Alberta. University of Toronto Press, Toronto.

Moss, E. H., and G. Pegg. 1963. Noteworthy plant species and communities in westcentral Alberta. Canadian Journal of Botany 41:1079–1105.

Mulligan, G. A. 1970a. Cytotaxonomic studies of *Draba glabella* and its close allies in Canada and Alaska. Canadian Journal of Botany 48:1431–1437.

Mulligan, G. A. 1970b. A new species of *Draba* in the Kananaskis Range of southwestern Alberta. Canadian Journal of Botany 48:1897–1898.

Mulligan, G. A. 1971. Cytotaxonomic studies of *Draba* species of Canada and Alaska: *D. ventosa*, *D. ruaxes* and *D. paysonii*. Canadian Journal of Botany 49:1455–1460.

Mulligan, G. A. 1974. Cytotaxonomic studies of *Draba nivalis* and its close allies in Canada and Alaska. Canadian Journal of Botany 52:1793–1801.

Mulligan, G. A. 1975. Personal communication. May and November.

Mulligan, G. A. 1976. The genus *Draba* in Canada and Alaska: key and summary. Canadian Journal of Botany 54:1386–1393.

Munz, P. A. 1946. The Onagraceae of Wyoming. University of Wyoming Herbarium Leaflet 13:1–20.

Ogilvie, R. T. 1962. Notes on plant distribution in the Rocky Mountains. Canadian Journal of Botany 40:1091–1094.

Ownbey, M. 1940. A monograph of the genus *Calochortus*. Annals of the Missouri Botanical Garden 27:371–560.

Ownbey, M., and H. C. Aase. 1955. Cytotaxonomic studies in *Allium*. I. The *Allium canadense* alliance. Research studies of the State College of Washington. Monograph Supplement 1.

Packer, J. G. 1972. A taxonomic and phytogeographical review of some arctic and alpine *Senecio* species. Canadian Journal of Botany 50:507–518.

Packer, J. G. 1975–1977. Letters dated 14 May 1975, 2 April 1976, 26 January 1977 and 3 November 1977.

Packer, J. G., and M. G. Dumais. 1972. Additions to the flora of Alberta. Canadian Field-Naturalist 86:269–274.

Packer, J. G., and D. H. Vitt. 1974. Mountain Park: a plant refugium in the Canadian Rocky Mountains. Canadian Journal of Botany 52:1393–1409.

Phillips, L. L. 1955. A revision of the perennial species of Lupines of North America. Research Studies of the State College of Washington 23:161–201.

Porsild, A. E. 1950. The genus *Antennaria* in northwestern Canada. Canadian Field-Naturalist 64:1–25.

Porsild, A. E. 1955. The Vascular Plants of the Western Canadian Arctic Archipelago. National Museum of Canada. Bulletin 135.

Porsild, A. E. 1959. Botanical excursion to Jasper and Banff National Parks, Alberta. National Museum of Canada, Ottawa.

Porsild, A. E. 1963. *Stellaria longipes* Goldie and its allies in North America. National Museum of Canada. Bulletin 186:1–35.

Porsild, A. E. 1964. Illustrated Flora of the Canadian Arctic Archipelago. National Museum of Canada. Bulletin 146. 2nd edition.

Porsild, A. E. 1965. The genus *Antennaria* in eastern arctic and subarctic America. Botanisk Tidsskrift 61:22–55.

Porsild, A. E. 1966. Contributions to the flora of southwestern Yukon Territory. National Museum of Canada. Bulletin 216.

Porter, C. L. 1944. The Rhamnaceae of Wyoming. University of Wyoming Herbarium Leaflet 7:1–4.

Porter, C. L. 1946. The Apiaceae of Wyoming. University of Wyoming Herbarium Leaflet 16:1–39.

Porter, C. L. 1950. The grasses of Wyoming. University of Wyoming Herbarium Leaflet 20:1–175.

Ramaley, F. 1939. Sand hill vegetation of northeastern Colorado. Ecological Monographs 9:1–51.

Raup, H. M. 1947. The botany of southwestern Mackenzie. Sargentia 6:1–275.

Raup, H. M. 1959. The willows of boreal western America. Contributions from the Gray Herbarium 185:1–95.

Raven, P. H., and D. M. Moore. 1965. A revision of *Boisduvalia* (Onagraceae). Brittonia 17:238–254.

Rigby, S. J., and D. M. Britton. 1970. The distribution of *Pellaea* in Canada. Canadian Field-Naturalist 84:137–144.

Rollins, R. C. 1941. Monographic study of *Arabis* in western North America. Rhodora 43:289–325, 348–411, 425–481.

Rossbach, R. P. 1940. *Spergularia* in North and South America. Rhodora 42:57–83, 105–143, 158–193, 203–213.

Russel, N. H. 1956. Morphological variation in *Viola selkirkii* Pursh. Castanea 21:53–62.

Scotter, G. W. 1976. Letter dated 8 January.

Scotter, G. W., and J. H. Hudson. 1975. *Carex illota* L. H. Bailey in Alberta. Canadian Field-Naturalist 89:74–75.

Sculthorpe, C. 1967. Biology of Aquatic Vascular Plants. Edward Arnold, London.

Shaw, K. 1966. A new species of *Oxytropis* for Alberta. Blue Jay 24:40.

Sherrington, P. 1975. Calgary's Natural Areas: A Popular Guide. Calgary Field Naturalist's Society, Calgary.

Siddall, J. L. 1977. Field checking progress report to field botanists on 'Provisional list of rare, threatened and endangered plants in Oregon'. Including additions to the provisional list. Mimeo.

Smithsonian Institution. 1975. Report on endangered and threatened plant species of the United States. Serial No. 94–A, United States Government Printing Office.

St. John, H. 1962. Monograph of the genus *Elodea* (Hydrocharitaceae) Part 1. The species found in the Great Plains, the Rocky Mountains and the Pacific States and Provinces of North America. Research Studies of the State College of Washington 30:19–44.

St. John, H. 1965. Monograph of the genus *Elodea*: Part 4 and summary. Rhodora 67:1–35, 155–180.

Svenson, H. K. 1939. Monographic studies in the genus *Eleocharis*. V. Rhodora 41:1–19, 43–77, 90–110.

Taylor, R. L. 1965. The genus *Lithophragma* (Saxifragaceae). University of California Publications in Botany 37:1–122.

Taylor, T. M. C. 1970. Pacific Northwest Ferns and their Allies. University of Toronto Press, Toronto.

Thomas, J. L. 1976. Plants. pp. 5–12. *In* H. Boschung, ed. Endangered and Threatened Plants and Animals of Alabama. Alabama Museum of Natural History, Bulletin No. 2.

Thompson, L. S., and J. Kuijt. 1976. Montane and subalpine plants of the Sweetgrass Hills, Montana, and their relation to early postglacial environments of the northern Great Plains. Canadian Field-Naturalist 90:432–448.

Tisdale, E. W., and A. C. Budd. 1948. Range extensions for three grasses in western Canada. Canadian Field-Naturalist 62:173–175. Tryon, A. F. 1957. A revision of the fern genus *Pellaea* section Pellaea. Annals of the Missouri Botanical Garden 44:125–193.

Tryon, A. F. 1972. Spores, chromosomes and relations of the fern *Pellaea atropurpurea*. Rhodora 74:220–242.

Tryon, R. M. 1941. Revision of the genus *Pteridium*. Rhodora 43:1–31, 37–70.

Tryon, R. M. 1955. *Selaginella rupestris* and its allies. Annals of the Missouri Botanical Garden 42:1–99.

Turner, B. L. 1956. A cytotaxonomic study of the genus *Hymenopappus* (Compositae). Rhodora 58:163–186, 208–242, 250–269, 295–308.

UAC. Herbarium, University of Calgary, Calgary, Alberta.

United States. 1976. Endangered and threatened species. Plants. Federal Register 41(117):24524–24572. June 16.

University of Alberta. 1975. Distribution maps of the Alberta range of rare plants on the Preliminary List of the Rare Plants of Alberta. Provided with annotation by M.G. Dumais. Unpublished.

Vermont. 1972. An act to provide for the preservation of certain endangered species. No. 159. Regulations under Vermont Statutes Annotated 13, Section 3642.

Wagner, W. H., E. G. Voss, J. H. Beaman, E. A. Bourdo, F. W. Case, J. A. Churchill, and P. W. Thompson. 1977. Endangered, threatened and rare vascular plants in Michigan. Michigan Botanist 16:99–110.

Wagnon. H. K. 1952. A revision of the genus *Bromus*, section Bromopsis, of North America. Brittonia 7:415–480.

Wallis, C. 1977. Preliminary lists of the rare flora and fauna of Alberta. Alberta Department of Recreation, Parks and Wildlife. Mimeographed.

Ward, G. H. 1953. *Artemisia*, section Seriphidium, in North America. A cytotaxonomic study. Contributions of the Dudley Herbarium 4:155–205.

Weir, J. F. 1974. Letter dated 7 February.

Welsh, S. L. 1960. Legumes of the north-central States: Galegeae. Iowa State Journal of Science 35:111–250.

Wherry, E. T. 1955. The Genus *Phlox*. Morris Arboretum Monograph 3, Philadelphia.

Woodson, R. E. 1954. The North American species of *Asclepias* L. Annals of the Missouri Botanical Garden 41:1–208.

Wynne, F. E. 1944. *Drosera* in eastern North America. Bulletin of the Torrey Botanical Club 71:166–174.

Young, S. B. 1971. The vascular flora of St. Lawrence Island with special reference to floristic zonation in the Arctic regions. Contributions from the Gray Herbarium 201:11–115.

Annexe I
Plantes retranchées

Achillea megacephala *Raup – (Boivin 1967, Kershaw & Morton 1976) – rapport non confirmé.*

Astragalus sericoleucus *Gray – (Senn 1938) – non confirmé par Boivin 1967, Barneby 1952.*

Boisduvalia densiflora *(Lindl.) Wats. – (Boivin 1967) – erreur sur l'étiquette.*

Carex abdita *Bickn. – (Kershaw & Morton 1976) – localité (CAN) probablement inexacte.*

Carex nesophila *Holm. – (Kershaw & Morton 1976) – non confirmé par Boivin 1967.*

Carex williamsii *Britt. – (Kershaw & Morton 1976) – non confirmé par Boivin 1967.*

Crataegus columbiana *Howell – (Ogilvie 1962) – rapport non confirmé.*

Cryptantha sobolifera *Payson – (Kershaw & Morton 1976, Ogilvie 1962) – mauvaise identification (Boivin 1967-72).*

Deschampsia mackenzieana *Raup – (Kershaw & Morton 1976) – rapport non confirmé.*

Draba cinerea *Adams – (Packer & Dumais 1972, Porsild 1959) – non confirmé par Mulligan 1976.*

Eleocharis rostellata *Torr. – (Moss 1959) – rapport non confirmé.*

Erigeron uncialis *Blake var.* conjugans *(Blake) Crong. – (Kershaw & Morton 1976, Packer & Dumais 1972, Porsild 1959) – mauvaise identification (Boivin 1967-72).*

Eriogonum flavum *Nutt. var.* piperi *(Greene) M. E. Jones – (Ogilvie 1962, Packer & Dumais 1972) – probablement mal identifié (CAN).*

Gymnocarpium robertianum *(Hoffm.) Newm. – (Moss 1959) – variété faible ou forme de* Carpogymnia dryopteris *(Boivin 1967-72).*

Hutchinsia procumbens *(L.) Desv. – (Boivin 1967-72) – rapport non confirmé.*

Hypericum formosum *HBK. var.* scouleri *(Hook.) Coult. – (Ogilvie 1962) – rapport non confirmé.*

Limosella subulata *Ives – (Boivin 1967-72) – non confirmé par Boivin 1967-72.*

Lupinus lepidus *Dougl. – (Packer & Dumais 1972) – rapport erroné (Gillett, pers. comm.).*

Prunus nigra *Ait. – (Kershaw 1976) - mauvaise identification (Cody à DAO).*

Rumex arcticus *Trautv. – (Kershaw & Morton 1976) – mauvaise identification (Dawson à CAN).*

Salix reticulata *L. – (Packer & Dumais 1972, Porsild 1959) – probablement mal identifié (Argus).*

Sparganium fluctuans *(Morong) Robins. – Moss (1959) – rapport non confirmé.*

S. hyperboreum *Laestad. – (Packer & Dumais 1972, Porsild 1959) – probablement mal identifié.*

Annexe II
Plantes probablement ou sûrement allogènes

Alopecurus geniculatus *L.*
Bidens comosa *(Gray) Wieg.*
Chenopodium subglabrum *Nels.*
Draba reptans *(Lam.) Fern.*
Linanthus septentrionalis *H. L. Mason*
Mirabilis nyctaginea *(Michx.) MacM.*
Myosotis laxa *Lehm.*
Rorippa sinuata *(Nutt.) Hitchc.*
Sagina decumbens *(Ell.) T. & G.*
Sagina procumbens *L.*
Schoenocrambe linifolia *(Nutt.) Greene*
Sporobolus neglectus *Nash*

Annexe III
Liste des plantes vasculaires rares de 'Alberta dans l'ordre taxonomique

LYCOPODIACEAE

Lycopodium sabinaefolium ssp. *sitchense*
L. sitchense
L. inundatum

SELAGINELLACEAE

Selaginella wallacei

ISOETACEAE

Isoetes bolanderi

OPHIOGLOSSACEAE

Botrychium boreale
B. lanceolatum var. lanceolatum

POLYPODIACEAE

Adiantum pedatum var. aleuticum
Athyrium alpestre
A. distentifolium ssp. americanum
Cheilanthes feei
C. gracillima
Dryopteris cristata
D. filix-mas
D. fragrans
D. phegopteris
Pellaea atropurpurea
Phegopteris polypodioides
Polypodium hesperium
P. vulgare var. columbianum
Pteridium aquilinum var. pubescens
Thelypteris phegopteris
Woodsia glabella
W. ilvensis

TAXACEAE

Taxus brevifolia

PINACEAE

Larix occidentalis
Pinus monticola
Thuja plicata

SPARGANIACEAE

Sparganium glomeratum

POTAMOGETONACEAE

Potamogeton obtusifolius
P. pusillus var. tenuissimus
P. robbinsii
P. strictifolius
Ruppia occidentalis
R. spiralis

JUNCAGINACEAE

Lilaea scilloides

HYDROCHARITACEAE

Elodea longivaginata

GRAMINEAE

Agropyron scribneri
A. violaceum ssp. andinum
Agrostis borealis
A. humilis
Aristida longiseta var. robusta
Bromus purgans
Calamagrostis lapponica var. nearctica
Elymus arenarius ssp. *mollis*
E. mollis
E. virginicus
Festuca occidentalis var. occidentalis
F. subulata
F. viridula
Glyceria elata
G. paucillora
Hierochloe alpina
Hordeum brachyantherum
H. jubatum var. *boreale*
H. nodosum
H. pusillum
Melica smithii
M. spectabilis
Muhlenbergia asperifolia
Munroa squarrosa
Oryzopsis canadensis
O. exigua
O. micrantha
Panicum leibergii
P. occidentale
P. thermale
P. wilcoxianum
Poa lanata
P. stenantha
Puccinellia hauptiana
P. pauciflora
Schedonnardus paniculatus
Trisetum canescens
T. cernuum
T. montanum
T. wolfii

CYPERACEAE

Carex athabascensis
C. eleusinoides
C. enanderi
C. eurystachya
C. glacialis
C. gymnoclada
C. illota
C. maritima var. maritima
C. mertensii
C. misandra
C. paysonis
C. petricosa
C. scopulorum
C. supina ssp. spaniocarpa
C. trisperma
Eleocharis elliptica
Eriophorum callitrix
Rhynchospora alba
R. capillacea
Scirpus atrovirens var. *pallidus*
S. clintonii
S. fluviatilis
S. pallidus

JUNCACEAE

Juncus stygius ssp. americanus
Luzula acuminata
L. arcuata

LILIACEAE

Allium geyeri
Calochortus apiculatus
Disporum hookeri var. *oreganum*
D. oreganum
Streptopus streptopoides
Tofieldia coccinea
Trillium ovatum
Yucca glauca

IRIDACEAE

Iris missouriensis

ORCHIDACEAE

Cypripedium acaule
C. montanum
Habenaria saccata
Hammarbya paludosa
Listera caurina
L. convallarioides
Malaxis monophyllos var. brachypoda
M. paludosa
Platanthera saccata
P. stricta

SALICACEAE

Populus angustifolia
Salix calcicola
S. lanata ssp. calcicola
S. sitchensis
S. stolonifera
S. tyrrellii

POLYGONACEAE

Eriogonum cernuum
Koenigia islandica
Polygonum austinae
P. engelmannii
P. minimum

CHENOPODIACEAE

Atriplex aptera
A. canescens var. *aptera*

A. powellii
A. truncata
Suckleya suckleyana

NYCTAGINACEAE

Abronia micrantha

PORTULACACEAE

Claytonia linearis
C. parviflora
Lewisia pygmaea
Montia linearis
M. parvifolia

CARYOPHYLLACEAE

Arenaria humifusa
A. nuttallii
Melandrium affine
Sagina nodosa
Silene douglasii
S. involucrata
Spergularia marina
Stellaria americana
S. arenicola
S. nitens
S. obtusa
S. umbellata

RANUNCULACEAE

Anemone nemorosa var. bifolia
A. quinquefolia var. *interior*
Aquilegia jonesii
Myosurus aristatus
M. minimus var. *aristatus*
Ranunculus nivalis
R. occidentalis var. brevistylis
R. verecundus

PAPAVERACEAE

Papaver freedmanianum
P. kluanensis
P. nudicaule var. *coloradense*
P. pygmaeum

CRUCIFERAE

Braya purpurascens
Cardamine parviflora var. arenicola
C. pratensis var. palustris
Draba densifolia
D. fladnizensis
D. glabella
D. hirta
D. kananaskis
D. lactea
D. longipes
D. stenopetala
D. ventosa
D. verna
Erysimum pallasii
Halimolobos virgata
Lesquerella alpina
Thellungiella salsuginea

SARRACENIACEAE

Sarracenia purpurea

DROSERACEAE

Drosera linearis

SAXIFRAGACEAE

Conimitella williamsii
Hemieva ranunculifolia
Heuchera glauca
Lithophragma parviflora
Philadelphus lewisii
Ribes inerme
R. laxiflorum
R. oxyacanthoides var. *saxosum*
R. viscosissimum
Saxifraga arguta
S. debilis
S. flagellaris
S. mertensiana
S. odontoloma
S. oregana var. subapetala
S. subapetala
Suksdorfia ranunculifolia
S. violacea
Telesonix jamesii var. heucheriformis
Tiarella trifoliata

ROSACEAE

Crataegus douglasii
Fragaria vesca var. bracteata
Luetkea pectinata
Physocarpus malvaceus
Potentilla egedii ssp. *yukonensis*
P. finitima
P. yukonensis
Spiraea densiflora var. splendens

LEGUMINOSAE

Astragalus kentrophyta
A. lotiflorus
A. purshii var. purshii
Lupinus arbustus ssp. pseudoparviflorus
L. arcticus ssp. subalpinus
L. minimus
L. nootkatensis
L. polyphyllus
L. wyethii
Oxytropis lagopus var. conjugans

GERANIACEAE

Geranium erianthum
G. pratense var. *erianthum*

POLYGALACEAE

Polygala paucifolia

CELASTRACEAE

Pachistima myrsinites

RHAMNACEAE

Ceanothus velutinus

MALVACEAE

Iliamna rivularis

GUTTIFERAE

Hypericum formosum var. nortoniae

VIOLACEAE

Viola selkirkii

ONAGRACEAE

Boisduvalia glabella
Camissonia andina
C. breviflora
Epilobium glaberrimum
E. luteum
E. platyphyllum
Gayophytum humile
G. racemosum
Oenothera andina
O. breviflora
O. caespitosa var. psammophila
O. flava
O. psammophila

HIPPURIDACEAE

Hippuris montana

UMBELLIFERAE

Angelica dawsonii
Bupleurum americanum
B. triradiatum ssp. *arcticum*
Lomatium cous
L. sandbergii
Osmorhiza aristatus var. *longistylis*
O. chilensis var. *purpurea*
O. longistylis
O. occidentalis
O. purpurea

ERICACEAE

Gaultheria humifusa
Hypopitys monotropa
Loiseleuria procumbens
Montropa hypopitys
Pterospora andromedea
Pyrola bracteata
P. picta
Rhododendron lapponicum

PRIMULACEAE

Androsace occidentalis
Centunculus minimus
Douglasia montana
Primula egaliksensis
P. stricta

GENTIANACEAE

Gentiana aquatica
G. calycosa var. obtusiloba
G. detonsa var. *raupii*
G. fremontii
G. glauca
G. raupii
Gentianella detonsa ssp. raupii

ASCLEPIADACEAE

Asclepias viridiflora

POLEMONIACEAE

Microsteris gracilis
Phlox alyssifolia
P. gracilis
Polemonium viscosum

HYDROPHYLLACEAE

Hydrophyllum capitatum
Nemophila breviflora
Phacelia linearis
P. lyallii

BORAGINACEAE

Cryptantha affinis
Mertensia longiflora

SCROPHULARIACEAE

Castilleja cusickii
C. pallescens
Mimulus floribundus
M. guttatus
M. lewisii
Pedicularis arctica
P. flammea
P. kanei
P. lanata
P. langsdorfii ssp. *arctica*
P. macrodonta
P. parviflora
P. racemosa var. alba
Penstemon albertinus
P. fruiticosus ssp. scouleri
P. lyallii

OROBANCHACEAE

Orobanche ludoviciana
O. uniflora

LENTIBULARIACEAE

Utricularia cornuta

PLANTAGINACEAE

Plantago canescens
P. maritima
P. patagonica var. spinulosa
P. septata
P. spinulosa

RUBIACEAE

Galium palustre

CAMPANULACEAE

Downingia laeta
Lobelia dortmanna
L. spicata

COMPOSITAE

Adenocaulon bicolor
Agoseris grandiflora
Ambrosia acanthicarpa
Antennaria acuta
A. alpina var. media
A. angustata
A. corymbosa
A. luzuloides
A. media
A. monocephala ssp. *angustata*
A. monocephala ssp. monocephala
Arnica alpina ssp. angustifolia
A. parryi
Artemisia borealis
A. campestris ssp. borealis
A. tridentata
Aster maccallae
A. pauciflorus
A. tanacetifolius
Bahia oppositifolia
Balsamorhiza sagittata
Brickellia grandiflora
Chrysanthemum bipinnatum ssp. *huronense*
Chrysothamnus nauseosus
Cirsium hookerianum var. *scariosum*
C. scariosum
Crepis atrabarba
E. evermanii
E. flagellaris
E. ochroleucus
E. pallens
E. radicatus
E. scotteri
Eupatorium purpureum var. maculatum
Franseria acanthicarpa
Gnaphalium microcephalum var. thermale
G. viscosum
Hymenopappus filifolius var. polycephalus
Lygodesmia rostrata
Machaeranthera tanacetifolius
Microseris cuspidata
M. nutans
Prenanthes alata
P. sagittata
Saussurea americana
Senecio conterminus
S. foetidus var. foetidus
S. foetidus var. *hydrophiloides*
S. hydrophiloides
S. megacephalus
Stephanomeria runcinata
S. tenuifolia
Tanacetum huronense var. bifarium
Thelesperma marginatum
T. subnudum
Townsendia condensata

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